

20030526.qrp v02_n932.qrl.20030526

Date: Mon, 26 May 2003 19:03:10 EDT
From: qrp-l@Lehigh.EDU
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: QRP-L digest 2932

QRP-L Digest 2932

Topics covered in this issue include:

- 1) [151293] Re: Third Order Intercept
by "Karl F. Larsen" <k5di@zianet.com>
- 2) [151294] Re: Antenna category?
by Brian Short <bshort4@cox.net>
- 3) [151295] Speaking of: : Data for understanding
by Ed Tanton <n4xy@earthlink.net>
- 4) [151296] Re: [fpqrp] FS: Rockmite 40
by Rick McKee <kc8aon@juno.com>
- 5) [151297] Software-Defined Rig?
by wkhibbert@juno.com
- 6) [151298] wtb
by "john gabbard" <johngabbard@usintouch.com>
- 7) [151299] Re: 10w into my +40 dbm IP3 receiver
by David Hinerman <WD8CIV@worldnet.att.net>
- 8) [151300] Fwd: QRP-MINIMAL-ART-SESSION
by dl6aaf@t-online.de (Uwe Meier)
- 9) [151301] AT Sprint in the WPX test
by "Ed Kessler" <aa3sj@arrl.net>
- 10) [151302] On the move again
by "Jerry Ford" <benlightnd13@mchsi.com>
- 11) [151303] Six meter openings and not one word
by Bill ROWLETT <kc4atu@yahoo.com>
- 12) [151304] More shack cleaning FS !
by Rick McKee <kc8aon@juno.com>
- 13) [151305] Re: Software-Defined Rig?
by Frank Brickley <brickley@pobox.com>
- 14) [151306] Fw: Software-Defined Rig?
by Larry Przyborowski <k3peg@comcast.net>
- 15) [151307] Antenna Analyzer II entering beta trial
by "George Heron N2APB" <n2apb@erols.com>
- 16) [151308] Re: Antenna category?
by Bob Nielsen <nielsen@oz.net>
- 17) [151309] Re: Happy Dance - another KD1JV "AT Sprint" is alive and performing
BEAUTIFULLY
by Ying Hum <yh@ottawa.com>
- 18) [151310] Re: 10w into my +40 dbm IP3 receiver
by "James R. Duffey" <JamesDuffey@comcast.net>

- 19) [151311] FS/FT MFJ 484 Memory Keyer
by "Mike Duke, K5XU" <k5xu@jam.rr.com>
- 20) [151312] October Simulated Emergency Test
by Richard Clem <clem.law@usa.net>
- 21) [151313] FP Numbers Needed
by "Jerry Ford" <benlightnd13@mchsi.com>
- 22) [151314] Re: QRP-L digest 2931
by Lee Boulineau <n4mvl@yahoo.com>
- 23) [151315] QHB #10 in the mail
by "George Heron N2APB" <n2apb@erols.com>
- 24) [151316] RE: FP Numbers Needed
by "John K7FD" <john_k7fd@cablespeed.com>
- 25) [151317] Re: Third Order Intercept
by Tim Groat <tcgroat@earthlink.net>
- 26) [151318] Re: Data for understanding
by Dan Tayloe <dtayloe@cox.net>
- 27) [151319] Re: Very neat cw key site
by Pete Burbank <plburbank@earthlink.net>
- 28) [151320] W9GR filtre spoken for
by "Doc K0EVZ" <dock0evz@earthlink.net>
- 29) [151321] Re: AT Sprint" Q1,Q2 transistor question"
by "Sverre Holm - LA3ZA" <la3za@qsl.net>
- 30) [151322] Summer of 2003 Fox Hunts
by "w8diz" <w8diz@fpqrp.com>
- 31) [151323] K0FRP/4
by alk0frp@attbi.com
- 32) [151324] Re: 10w into my +40 dbm IP3 receiver
by "Karl F. Larsen" <k5di@zianet.com>
- 33) [151325] Re: Third Order Intercept
by "Nick Kennedy" <nkennedy@tcainternet.com>
- 34) [151326] Re: Very neat cw key site
by "Michael C. Boatright" <ko4wx@mindspring.com>
- 35) [151327] OP - USS Kidd Memorial Day operation
by James R Giammanco <n5ib@juno.com>
- 36) [151328] Appalachian Trail in PA May 26
by "Ron Polityka" <wb3aal@fast.net>
- 37) [151329] Re: PA or antenna
by Steve.Lawrence@ITWFEG.COM
- 38) [151330] ANC-4 Sold
by Vince Santis <vsantis@earthlink.net>
- 39) [151331] Re: Summer of 2003 Fox Hunts
by "George, W5YR" <w5yr@att.net>
- 40) [151332] Re: Third Order Intercept
by Jim Eshleman <jce0@Lehigh.EDU>
- 41) [151333] HW9-8 Main tuning caps
by "john gabbard" <johngabbard@usintouch.com>
- 42) [151334] Vibroplex FS
by Vince Santis <vsantis@earthlink.net>

- 43) [151335] RE: Very neat cw key site
by "Tom" <kf4yyd@adelphia.net>
- 44) [151336] Re: Software-Defined Rig?
by wkhibbert@juno.com
- 45) [151337] Error in Miniboots board. Dang it.
by "Doug Hendricks" <ki6ds@dph.dpol.net>
- 46) [151338] Re: Third Order Intercept
by "George, W5YR" <w5yr@att.net>
- 47) [151339] QRP Utilization of Automotive Transport Electrical System
Maintenance Devices, Solar
by Brian Short <bshort4@cox.net>
- 48) [151340] Two MFJ active filters FS
by "Ken Simpson, W8EK" <W8EK@fdt.net>
- 49) [151341] Re: Third Order Intercept
by "George, W5YR" <w5yr@att.net>
- 50) [151342] TS930 Back on line
by "Jerry Ford" <benlightnd13@mchsi.com>
- 51) [151343] Re: AT Sprint" Q1,Q2 transistor question"
by Donald E Sanders <w4bws@juno.com>
- 52) [151344] Lies, Darn Lies, and Specifications
by Brian Short <bshort4@cox.net>
- 53) [151345] Re: Third Order Intercept
by Jim Eshleman <jce0@Lehigh.EDU>
- 54) [151346] Dumb Guy Question
by Brian Short <bshort4@cox.net>
- 55) [151347] Re: Miniboots Arrival??
by "Leigh Hawkes" <leighhawkes@ns.sympatico.ca>
- 56) [151348] FPqrp Summer Truffle Hunts
by "w8diz" <w8diz@fpqrp.com>
- 57) [151349] Re: Dumb Guy Question
by George Fremin III <geoiii@kkn.net>
- 58) [151350] Another AT Sprint lives
by "Paul Ermisch" <paul@ermisch.com>
- 59) [151351] Re: Dumb Guy Question
by "Steve Yates - AA5TB" <aa5tb@arrl.net>
- 60) [151352] Clarification of Dumb Guy Question
by Brian Short <bshort4@cox.net>
- 61) [151353] Re: Clarification of Dumb Guy Question
by George Fremin III <geoiii@kkn.net>
- 62) [151354] 1st MiniBoots QSO
by AB6UI@aol.com
- 63) [151355] Re TS930 and solder joints
by Mike Czuhajewski <wa8mcq@comcast.net>
- 64) [151356] Re: Several Antenna Questions
by Caitlyn Martin <ku4qd@earthlink.net>
- 65) [151357] Re: Dumb Guy Question
by Caitlyn Martin <ku4qd@earthlink.net>
- 66) [151358] Memorable Memorial Weekend backpacking & QRP

- by "Dave Ek" <ekdave@earthlink.net>
67) [151359] Re: Third Order Intercept
by "George, W5YR" <w5yr@att.net>
68) [151360] K2 wanted
by Fred Bonavita <k5qlf@yahoo.com>
69) [151361] Re: Data for understanding
by "Karl F. Larsen" <k5di@zianet.com>
70) [151362] RE: Re TS930 and solder joints
by "Jim Sheldon" <w0eb@cox.net>
71) [151363] Re: 1st MiniBoots QSO
by Randy Foltz <rfoltz@turbonet.com>
72) [151364] Diamond CP6 Antenna
by "Tony Fishpool" <g4wif@btinternet.com>

Date: Sun, 25 May 2003 17:11:16 -0600 (MDT)
From: "Karl F. Larsen" <k5di@zianet.com>
To: "George, W5YR" <w5yr@att.net>
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [151293] Re: Third Order Intercept
Message-ID: <Pine.LNX.4.44.0305251644150.1351-100000@bucket.dog>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Not quite George. The principle that has been used up to now is that the two signals f_1 and f_2 must be clear out of the passband of the receiver under test. Then the receiver is tuned to 3d inter-mod frequency which is $2f_1 - f_2$ or $2f_2 - f_1$. Putting numbers in if $f_1 = 3.502$ and $f_2 = 3.504$ then we will be listening on $2(3.502) - 3.504 = 3.500$ MHz and f_1 and f_2 are outside the 500 Hz passband. But as you move f_1 and f_2 close together you get the 3d inter-mod frequency very close to f_1 and f_2 then bleed through of f_1 or f_2 can ruin a measurement.

I think I was confused early on thinking that TOI comes from another ARRL measurement called Inband IMD Test. This test is a new one and may prove to be better than TOI. But it measures another factor different from TOI.

On Sun, 25 May 2003, George, W5YR wrote:

- > Not really, Cecil.
- >
- > ARRL routinely determines IP3 for receivers with 20 kHz and now 5 kHz
- > spacing. While it may be more "meaningful" - especially if you want to
- > compare the 7800 with the ORION - to measure at 1 kHz or 200 Hz, there is

```
> nothing wrong or ill-intentioned with quoting a figure that can be directly
> compared with every other receiver that ARRL has tested. The usual test
> conditions for the highest IP3 number is for all preamps and attenuators to
> be off, so that can be assumed.
>
> I don't think that Icom is/was claiming +40 dBm at *any* spacing. By not
> specifying a spacing, they were implying the routine 20 kHz spacing. I know
> of no other amateur market receiver that can show +40 dBm IP3 at 20 kHz
> spacing.
>
> It may well be that at 500 Hz spacing, the ORION will do better in this
> department, but I think it is a little strong to claim that Icom's claim is
> just "a marketing ploy."
>
> Let's also keep in mind that neither the ORION nor the 7800 have been tested
> by an independent lab to verify any specs. Everything that we have been
> given is based upon the manufacturer's own tests. Ten Tec *claims* an IP3 in
> excess of 20 dBm for 1 kHz spacing, but that has yet to be verified. I have
> no reason to doubt their veracity but neither do I doubt Icom's claim - and
> for the same reasons.
>
> Enough said! <:} If you want to go ahead with this topic, I suggest that we
> do it privately since it is sorta OT for QRP-L.
>
> Hope you are doing OK . . .
>
> 73/72, George
> Amateur Radio W5YR - the Yellow Rose of Texas
> Fairview, TX 30 mi NE of Dallas in Collin county EM13QE
> "In the 57th year and it just keeps getting better!"
> <mailto:w5yr@att.net>
>
>
>
>
>
>
>
> ----- Original Message -----
> From: "KD5NWA" <KD5NWA@cbayona.com>
> To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
> Sent: Sunday, May 25, 2003 2:09 PM
> Subject: Re: Third Order Intercept
>
>
> > Does anyone know what the spacing of the input frequencies are when they
> > claim +40 dbm
> > IP3? If it is 20Khz then it's a marketing ploy, to be more meaningful the
```

> > spread needs to be 1 to 5 KHz, which is more realistic of band conditions,
> > and they need to specify if the preamp and attenuators are turned on/off.
> > Many manufactures like to use the 20kHz spacing because it makes their
> > numbers better, still +40 dbm is a nice number.

>
>

--

- Karl Larsen k5di Las Cruces,NM Az ScQRPions -

Date: Sun, 25 May 2003 18:11:16 -0400
From: Brian Short <bshort4@cox.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [151294] Re: Antenna category?
Message-ID: <CE3A984F-8EFD-11D7-AD83-00306543B616@cox.net>
Content-Type: text/plain; charset=US-ASCII; format=flowed
Mime-Version: 1.0 (Apple Message framework v552)
Content-Transfer-Encoding: 7bit

On Wednesday, May 21, 2003, at 12:36 PM, Garie Halstead wrote:

> Anyway, the point being, it's kind of tough seeing an attic dipole
> station going up against a 7 element tribander at 80 ft station. The
> same holds true for those who live in condos using stealth antennas.

The same holds true for those in the West competing with East Coast
stations into Europe (on any antenna!).

> If not now existng, how does the list feel about such an event?
> Obviously, this would not be a portable operating event where we all
> are using simple antennas and throwing wires in trees. HI

I have few strong feelings about much of anything, but I will say
that attitude makes a huge difference. Seeing scores from various
stations, we all tend to compare scores and that is the spirit of
competition. Remember that you can always choose to only
"compete" with yourself! It is all attitude. How well do you feel that
you did for you and your station?

Competition can be a healthy motivator, but we should all remember
we are comparing scores calculated a certain way, on a certain
weekend etc. It is in no way a measure of our worthiness as individuals
or as citizens (or as "operators").

Cooperation is also important. Some people are strongly competitive,

while others are more cooperative, helping others and doing for others.

It is too bad that the reward from helping others is not always as big of a motivator as competing with others and comparing ourselves.

Some of us are motivated intrinsically while others are extrinsically motivated. It is important to keep these things in perspective.

Contest scores, relative scores, or score listings are not a measure of self-worth.

--

See my web page: <http://www.k7on.com>

Date: Sun, 25 May 2003 19:16:23 -0400

From: Ed Tanton <n4xy@earthlink.net>

To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>,
noga reflector <nogaqrp@mailman.qth.net>

Subject: [151295] Speaking of: : Data for understanding

Message-ID: <5.2.0.9.2.20030525190554.0398de50@pop.earthlink.net>

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"; format=flowed

I just received the nice package of books the ARRL sends you when nominated as a Technical Specialist... including the 2003 ARRL Handbook. I have to confess I have not bought one for a couple years due to... well... the price vs new stuff/etc. (Keep in mind I have what I consider to be an excellent technical library; most of my QSTs; as well as a number of the ARRL CDs from QEX/etc. and the full Ham radio magazine set.) So I have just had to restrain myself.

The point of this is that I am quite pleased and surprised at the improvements. They are noticeable immediately... but if you start really looking, what some of us (alas myself included) have considered to be a lessening in technical expertise requirements in Amateur Radio has resulted in a '10 or 20 db' improvement in EXPLANATIONS. Lots better detail where, in the past, I have felt there was short shrift for several important topics.

So... if you haven't looked at one in a while, take a look. It's definitely very improved.

73 Ed Tanton N4XY <n4xy@earthlink.net>

Ed Tanton N4XY
189 Pioneer Trail
Marietta, GA 30068-3466

website: <http://www.n4xy.com>

All emails <IN> & <OUT> checked by
Norton AntiVirus with AutoProtect

LM: ARRL QCWA AMSAT & INDEXA;
SEDXC NCDXA GACW QRP-ARCI
OK-QRP QRP-L #758 K2 (FT) #00057

"He that gives up a little liberty to gain
temporary security will lose both and
deserve neither".
--Benjamin Franklin

"Suppose you were an idiot ...
and suppose you were a member of
Congress... but I repeat myself."
--Mark Twain

Date: Sun, 25 May 2003 19:30:52 -0400
From: Rick McKee <kc8aon@juno.com>
To: fpqrp-l@mpna.com, qrp-l@Lehigh.EDU
Subject: [151296] Re: [fpqrp] FS: Rockmite 40
Message-ID: <20030525.193219.9166.4.kc8aon@juno.com>

The RockMite 40 has been sold, thanks for the replies !

72/73 de: Rick McKee, KC8AON <> Willow Wood, Ohio <> Grid: EM88rl
SW 40+, HW-8, Yaesu FT-7, Homebrew 6V6 tube TX & Hallicrafters SW500 RX
<> RockMite 40 <>
QRP-L #2112, FPqrp #33, AR QRP #269
QRP'ers DEPEND ON SKILL - NOT RAW POWER !

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Date: Sun, 25 May 2003 20:07:15 -0400
From: wkhibbert@juno.com
To: qrp-1@lehigh.edu
Subject: [151297] Software-Defined Rig?
Message-ID: <20030525.200715.-471721.0.wkhibbert@juno.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hi. Keith here in the Depths of the Great Bergen Swamp

I got too fast on the <DELETE> key last week. Someone posted something on either a meeting about a Software-Defined rig (1 watt from 0 - 60 MHz) or spoke of such a beast being developed. I thought that it was a TAPR project, but have not been able to find a link as of yet.

Any help out there? Was I dreaming this up or did I actually see a reference for such a rig...

73, Wm. Keith Hibbert, WB2VUO, TC/WNY ARRL Section
President, Brockport Amateur Radio Klub
"My night light runs more power than my Rig!!!"

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Date: Sun, 25 May 2003 17:09:09 -0700
From: "john gabbard" <johngabbard@usintouch.com>
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [151298] wtb
Message-ID: <002401c3231b\$086ebcb0\$ee811c0c@john>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Before I order one, does anyone on the list have a Whiterook MK44 iambic paddle, leg strap and cable for sale? Thanks 72 John KF7OM

Date: Sun, 25 May 2003 20:28:24 -0400
From: David Hinerman <WD8CIV@worldnet.att.net>
To: qrp-1@lehigh.edu
Subject: [151299] Re: 10w into my +40 dbm IP3 receiver
Message-ID: <5.1.1.6.1.20030525202515.00b1cf18@postoffice.worldnet.att.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

>Having said all that, I think that the efforts of most rig designers today
>would be better put to use reducing the wide band noise introduced in the IF
>and AF stages, as well as reducing the distortion introduced in the over
>driven audio stages of many rigs.

Jim,

Is that what causes that ever-present hiss on an HF receiver?

I bought a CW filter just to try to knock that stuff down some. It gets
pretty annoying.

Dave

Dave Hinerman
WD8CIV@att.net

Date: Mon, 26 May 2003 03:00:49 +0200 (MET DST)
From: dl6aaf@t-online.de (Uwe Meier)
To: qrp-1@lehigh.edu
Subject: [151300] Fwd: QRP-MINIMAL-ART-SESSION
Message-ID: <200305260100.DAA03230@joringel.t-online.de>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

From: DJ7ST@DB0ABZ.#NDS.DEU.EU

QRP-CONTEST-COMMUNITY (qrpc)
c/o Dr.Hartmut Weber, DJ7ST

22-Mai-2003

Dear QRP and homebrew friends,

in one week, at Ascension Day the 4th QRP-MINIMAL-ART-SESSION will take place. There's still time to complete simple projects. Like e.g. the "Michigan Mighty Mite" featured in SPRAT #105, a basic single-stage crystal controlled solid state tx.

The complete QRP-MAS rules and a list of suitable circuits have been posted to the packet radio network some weeks ago. (Search by entering "C < DJ7ST").

Caveat constructor! Doing it with (almost) nothing is an art. A simple tx producing a immaculate signal when connected to a dummy load, may show ugly reactions when confronted with braid currents and a mismatched antenna, resulting in chirps and worse.

When using a simple tx an additional antenna matching circuit, e.g. a pi filter, is highly recommended, especially as it doesn't add to the component tally. When not completely mis-dimensioned, the additional losses will be negligible. It may even prove to be an advantage. The "Piccolino" I built became more efficient with a pi filter added. Apparently I used a less than optimum Q for the tank circuit, and the pi filter matched "backwards".

So please test the miniscule tx connected to an antenna, with the rx antenna disconnected or the rx input terminal grounded.

The QRP-MAS, during which no serial numbers are exchanged, thus is no real contest, meaning we are free to use 3560-3580kHz. Expect MAS signals between 3576 and 3579 from operators who knitted a simple tx around a 3579kHz (the experimenters' frequency) low-cost crystal. We shouldn't disappoint them.

So please don't forget to monitor frequencies above 3560kHz, especially 3575-3580kHz.

And a tip how to "beat it to zero". Even a crystal controlled tx may exhibit considerable retroaction when tuned to zero beat without its final amplifier connected. Better results are obtained by tuning the complete tx with full power transmitted into a dummy load. Then the frequency will stay put. Power levels around 1w will not even overdrive the rx when you disconnect its antenna.

BCNU in the QRP-Minimal-Art-Session on the evening of Ascension Day.

73/2 "Hal", Hartmut, DJ7ST (once again tks to Eddi, DK3UZ, for translation)

Date: Sun, 25 May 2003 21:25:13 -0400
From: "Ed Kessler" <aa3sj@arrl.net>
To: qrp-l@Lehigh.EDU
Subject: [151301] AT Sprint in the WPX test
Message-ID: <3ED134B9.24317.9CB6726@localhost>
MIME-Version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT
Content-description: Mail message body

Good Evening,

I gave the AT Sprint a little workout in the WPX contest. This rig has amazing performance for such a small package. I ended up with about 30 QSOs in about 2.5 hrs. of operating time which isn't all that many, but I decided just to look for different entities for each QSO.

The RX with it's narrow filter and strong front end held up very well, and it was interesting to hear the AGC kick in as I approached very strong signals.

The Sprint will definitely manage Field Day nicely.

I hope someone does a re-run of this kit; I'd build another one.

73
Ed AA3SJ

Date: Sun, 25 May 2003 20:34:13 -0500
From: "Jerry Ford" <benlightnd13@mchsi.com>
To: "qrp-l" <qrp-l@lehigh.edu>, "FPigs" <fpqrp-l@mpna.com>
Subject: [151302] On the move again
Message-ID: <00b001c32326\$eaa33600\$f374da0c@mchsi.com>

OK folks: Too much QRM for me. I've moved up to 10.123. Lets see if I can split the QRO guys and the digital group tonight.

Jim (K4YBB) was in here trying a bit ago and got wiped off the face of the earth. Maybe up here Jim if your still around.

72 to the gang: Jerry N0JRN
FP # 546, ARS # 923, ARCI # 11049, ARRL,
Springfield, Mo. <http://home.mchsi.com/~n0jrn/>
MP + # 8, K 1 # 608, SW 20 +, TT 1340 , RM 20 &
40, Tiny Tornado 20, 30, 40, 80, SMK - 1
and so on and so on

Date: Sun, 25 May 2003 18:52:46 -0700 (PDT)
From: Bill ROWLETT <kc4atu@yahoo.com>
To: qrp-1@Lehigh.EDU
Subject: [151303] Six meter openings and not one word
Message-ID: <20030526015246.38055.qmail@web14201.mail.yahoo.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii

With the great number of FT817's on this list, you would think that there would be some talk about the openings today. I guess you guys just don't know where the fun is. The fun times will be around until the middle of August. Get on the band and have some fun.

See you on six.

73, Bill kc4atu

Do you Yahoo!?
The New Yahoo! Search - Faster. Easier. Bingo.
<http://search.yahoo.com>

Date: Sun, 25 May 2003 21:51:56 -0400
From: Rick McKee <kc8aon@juno.com>
To: fpqrp-1@mpna.com, qrp-1@Lehigh.EDU
Subject: [151304] More shack cleaning FS !
Message-ID: <20030525.215226.3798.0.kc8aon@juno.com>

For sale:

1 - Vectronics VEC-830 SSB filter in Vectronics metal case. Has some front and back panel scratches but works good. Use with your headphones. Has 3 settings and bypass & runs on 9 volt battery. Circuit board looks very much like the older MFJ filters. No manual. \$20 plus shipping

1 - Lionel J-38 key with original bakelite mounting plate. Shorting bar missing, but otherwise in very good shape, no cable. \$30 plus shipping

1 - British straight key marked "W.T. 8 AMP No.2 MK III This is a nice key made of what appears to be mainly bakelite except for the screws and

contacts, no cable. \$30 plus shipping

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Date: Sun, 25 May 2003 22:10:08 -0400 (EDT)
From: Frank Brickle <brickle@pobox.com>
To: wkhibbert@juno.com
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [151305] Re: Software-Defined Rig?
Message-ID: <Pine.LNX.4.44.0305252159080.27221-100000@localhost.localdomain>
MIME-version: 1.0
Content-type: TEXT/PLAIN; charset=US-ASCII
Content-transfer-encoding: 7BIT

> ...a Software-Defined rig (1 watt from 0 - 60 MHz)
> or spoke of such a beast being developed. I thought that it was a TAPR
> project, but have not been able to find a link as of yet.
>
> Any help out there? Was I dreaming this up or did I actually see a
> reference for such a rig...

<http://www.flex-radio.com>

The SDR-1000. A three-board set that talks to the serial port of a PC,
and uses the soundcard stereo gazintas and gazoutas for quadrature
sampling. The boards are currently trickling out; the hardware
is in a fairly refined state, but the software is not, to put it gently.

I have a board set here and am trying to get it all up and running as we
speak. Bob N4HY and I are actively doing some software development for it.

The existing software is all Win32, but for anything other than
traditional transceiver front-panel emulation, Linux is probably a more
comfortable platform.

73
Frank
AB2KT

Date: Sun, 25 May 2003 22:11:39 -0400
From: Larry Przyborowski <k3peg@comcast.net>
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [151306] Fw: Software-Defined Rig?
Message-ID: <00d501c3232c\$24995e70\$6401a8c0@K3PEGMAIN>
MIME-version: 1.0
Content-type: text/plain; charset=iso-8859-1
Content-transfer-encoding: 7BIT

Hi,
The info is at <http://www.flex-radio.com>

72, Larry

> Subject: Software-Defined Rig?
>
>
> Any help out there? Was I dreaming this up or did I actually see a
> reference for such a rig...
>
> 73, Wm. Keith Hibbert, WB2VUO

Date: Sun, 25 May 2003 22:00:30 -0400
From: "George Heron N2APB" <n2apb@erols.com>
To: "NJQRP" <njqrp@njqrp.org>, "QRP-L" <qrp-l@Lehigh.EDU>,
"NoVAQRP" <NoVaQRP@topica.com>, "EPA-QRP" <EPA-QRP@yahooogroups.com>
Subject: [151307] Antenna Analyzer II entering beta trial
Message-ID: <002901c3232c\$b6085b40\$87c03ad0@GHLTP4>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

A bunch of people have been asking about our progress on the Antenna Analyzer II ... with the breakthrough of getting the HC908 Daughtercards shipped last month we've been able to make some major progress on this exciting derivative project.

At this point we're getting ready to enter into beta trial with a several

units (in addition to our own) and we hope to be getting some good feedback that we can use to complete the rollout of this NJQRP kit. Pending a successful beta trial, we expect to have the kit available for sale during the summer. The final price isn't yet established, but we've kept to our promise with the basic kit coming in for "under \$100".

You can see some major updates and technical detail for the Antenna Analyzer II on the NJQRP website ... <http://www.njqrp.org/antanal>

73, George N2APB n2apb@amsat.org
and Joe N2CX n2cx@voicenet.com

PS: We are all set for beta trial users, so no more requests for this please.

Date: Sun, 25 May 2003 19:16:00 -0700
From: Bob Nielsen <nielsen@oz.net>
To: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [151308] Re: Antenna category?
Message-ID: <20030526021600.GA32488@n7xy.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

On Thu, May 22, 2003 at 08:21:06PM -0400, Bill Coleman wrote:
> On 5/21/03 12:36 PM, Garie Halstead at khyberpass65@yahoo.com wrote:
>
> >Does anyone know of a QRP operating event where stations are not only
> >categorized by their output power but also by their antenna system?
>
> The WPX contest has a TS category (Tribander and Single element
> antennas), and also recognizes QRP operation.
>
> WPX CW is this weekend! Get on and operate. Oh, and if you hear NQ4I on
> 160m, give me a call!

I didn't hear anyone on 160 and only a few stations on 80 and 10. I made 126 contacts on 40, 20 and 15 (24,274 points) although it was a bit frustrating at times running 5 watts into a vertical. Conditions were probably the biggest factor. I couldn't break through the combination of QRM and QRN in many cases (even with some US stations), but did work a few Europeans on 20 and a CT3 on 15.

My purpose in operating the contest was to have fun and fortunately

that is usually achievable. It also gave me a good opportunity to familiarize myself with my new K2 and KDSP2 under somewhat difficult conditions.

73, Bob N7XY

Date: Sun, 25 May 2003 22:36:53 -0400
From: Ying Hum <yh@ottawa.com>
To: Sam Billingsley <sambillingsley@earthlink.net>
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [151309] Re: Happy Dance - another KD1JV "AT Sprint" is alive and performing BEAUTIFULLY
Message-ID: <20030525223653.A3000@netwinder>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii

* Sam Billingsley (sambillingsley@earthlink.net) [030525 01:08]:
> For those of you that are building one of Steve's limited production kits,
> the AT Sprint, keep at it cuz it's more than worth the effort.
>

Here is my version of the KD1JV "AT Sprint"

<http://yhum.dyndns.org/ATSprint/image4.htm>
<http://yhum.dyndns.org/ATSprint/image3.htm>

Some explanation on the packaging.

I used a digital clock case to house the radio.
I picked up this case at one of the conference and
the case is a miniature 19" rack.

You don't see the control swithes exposed outside of the case.
I added a RJ45 connector to bring out the 4 function
switches, paddle and audio signal. The idea is to
operate the radio while sitting on the floor inside the tent.

Ying Hum
Ottawa
yh@ottawa.com

Date: Sun, 25 May 2003 20:39:27 -0600

From: "James R. Duffey" <JamesDuffey@comcast.net>
To: WD8CIV@worldnet.att.net
Cc: QRP-L <qrp-l@lehigh.edu>
Subject: [151310] Re: 10w into my +40 dbm IP3 receiver
Message-ID: <BAF6DA7F.756F%JamesDuffey@comcast.net>
MIME-version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT

Yes, that is what causes that ever present hiss.

It is better to get rid of the IF noise before the product detector. And it is best to filter out the noise after the product detector before the audio amplification stages. Keeping the gain down and adding an audio stage or two helps as well. - Dr. Megacycle

James R. Duffey KK6MC/5
Cedar Crest NM 87009 DM65

Date: Sun, 25 May 2003 21:46:07 -0500
From: "Mike Duke, K5XU" <k5xu@jam.rr.com>
To: "qrp list" <qrp-l@lehigh.edu>
Subject: [151311] FS/FT MFJ 484 Memory Keyer
Message-ID: <011501c32331\$2e908a20\$37d8a418@jam.rr.com>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

This is an early 80's model keyer with 3 banks of 4 25 character memories, plus one larger memory whose exact capacity I don't recall at the moment.

It includes the wall wart power supply, but you furnish your favorite paddles.

Make purchase or trade offer.

Mike Duke, K5XU
American Council of Blind Radio Amateurs

Date: Sun, 25 May 2003 22:42:30 -0500

From: Richard Clem <clem.law@usa.net>
To: <qrp-1@lehigh.edu>
Cc: <clem.law@usa.net>
Subject: [151312] October Simulated Emergency Test
Message-ID: <220HeZDQE5456S01.1053920550@uwdvg001.cms.usa.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: quoted-printable

Several weeks ago, the subject of QRP participation in the October Simulated
Emergency Test (SET) came up. A few of us continued that discussion on
another mailing list (<http://groups.yahoo.com/group/QRP-SET/>). =

I came up with some ideas on how we could participate. I ran them past the
rest of the other list, and didn't hear any objections, so I'm bringing these
ideas back here.

Basically, I think we should plan on doing two things for SET. First, we
should plan on operating as many QRP nets as possible that weekend, and
encourage everyone to check in either from their home location, or preferably,
from a portable location or with battery power. After the SET weekend,
someone (probably me, unless someone else would like to volunteer) would
collect reports of numbers of participants, etc., and write up a report for
the ARRL or whoever else was interested.

Secondly, I think we should pass as much traffic as possible through existing
(QRO) traffic nets. One of the purposes of the SET weekend is to show how
existing nets perform during high-stress conditions. We could help in that
regard, but more importantly, we could show a lot of other amateurs who are
involved in public-service communications just how competent we are. If a lot
of other amateurs wind up handling messages that originated from "new"
stations, all of which happen to be QRP, I think that would be quite
noticeable.

I have written up a proposal in more detail, and it is posted on the web at

<http://www.geocities.com/clem.law/SET.html> . If you would like me to e-mail it to you, just let me know. Please let me know any suggestions anyone might have. This is a proposal for discussion, so please discuss!

If you post any comments to the list, I would appreciate if you would e-mail a copy to me directly. I subscribe to the digest, and it's easy to miss an individual message.

TNX & 73,
Rick W0IS

Date: Sun, 25 May 2003 23:01:25 -0500
From: "Jerry Ford" <benlightnd13@mchsi.com>
To: "qrp-l" <qrp-l@lehigh.edu>, "FPigs" <fpqrp-l@mpna.com>
Subject: [151313] FP Numbers Needed
Message-ID: <014401c3233b\$7b31a6c0\$f374da0c@mchsi.com>

Hey, Any of you folks on the West end of the country want to swop FP #'s. Stop by and see me on 10.114. I'm sittin here listening and calling occasionally

Hope to see ya there: 72 Jerry N0JRN
FP # 546, ARS # 923, ARCI # 11049, ARRL,
Springfield, Mo. <http://home.mchsi.com/~n0jrn/>
MP + # 8, K 1 # 608, SW 20 +, TT 1340 , RM 20 &
40, Tiny Tornado 20, 30, 40, 80, SMK - 1
and so on and so on

Date: Sun, 25 May 2003 21:10:21 -0700 (PDT)
From: Lee Boulineau <n4mvl@yahoo.com>
To: qrp-l@Lehigh.EDU
Subject: [151314] Re: QRP-L digest 2931
Message-ID: <20030526041021.60271.qmail@web21205.mail.yahoo.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii

Larry,

Do you need in counties in Florida???

73 de N4MVL Lee

Do you Yahoo!?

The New Yahoo! Search - Faster. Easier. Bingo.

<http://search.yahoo.com>

Date: Mon, 26 May 2003 00:47:46 -0400

From: "George Heron N2APB" <n2apb@erols.com>

To: "EPA-QRP" <EPA-QRP@yahoogroups.com>,
"NoVAQRP" <NoVaQRP@topica.com>, "QRP-L" <qrp-l@Lehigh.EDU>,

Subject: [151315] QHB #10 in the mail

Message-ID: <00d601c32341\$f49de220\$87c03ad0@GHLTP4>

MIME-Version: 1.0

Content-Type: text/plain;

charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

Hi folks -

We got issue #10 of QRP Homebrewer into the mail this weekend, and we hope you'll agree that it's another great one!

All subscribers should have their copy in hand sometime throughout this coming week.

73, George N2APB n2apb@amsat.org

editor & publisher, QRP Homebrewer magazine

www.njqrp.org/data/qrp_homebrewer.html

=====
CONTENT of QHB #10

=====
High-Performance HF VFO using the AD9854 DDS Chip, by Craig Johnson, AA0ZZ
Back in 1997, radio frequency homebrewers really began taking advantage of the conveniences that DDS technology offered: 1-chip simplicity, DC-to-30 MHz signal generation ability and relatively decent signal purity. Since then, AA0ZZ and others have been creating and refining signal generators using this technology. Within the last 12 months, however, the author began working with one of the latest DDS chips from Analog Devices, with an end goal of designing a 0-60 MHz VFO for use with the recently introduced KK7B

high-performance R2PRO receiver. This the AA0ZZ story of taming the AD9854 dual-output (I-Q) DDS chip and creating a PCB in the process that others can also use. The pc board and PICs are being made available to help others construct this project.

Build an Active Antenna, by Phil DeCaire, WB7AEI

If you need an antenna for a receiver in another room, or to check out a project on a workbench, or even to run a second station receiver, then maybe an active antenna would be a good answer.

Building Up the QuickieLab, by Joe Everhart, N2CX

Remember the QuickieLab from the last issue? It's the experimenters' platform containing a BASIC Stamp controller and lots of useful hardware peripherals that you can patch in to create real cool accessories for your QRP bench. In this issue, N2CX describes how you can build up your QuickieLab circuit board in stages to end up with a fully functional RF experimentation platform in quick order.

A Multiband Slinky Coil for the PAC-12 Antenna, by James Bennett, KA5DVS

Here's a fun and easy-to-construct modification to the KA5DVS PAC-12 Antenna presented in QRP Homebrewer #8. Just find yourself a classic metal Slinky, secure it to a short piece of PCV and use the assembly as a loading coil for the PAC-12. A user-adjustable clip lead allows you to tune the antenna on multiple bands. Hope you enjoy this project!

The NJQRP "Sniffer" Field Strength Meter, by J. Everhart, N2CX and G. Heron, N2APB

An RF field strength meter is one of the simpler - yet more valuable - pieces of test equipment a ham can have around the shack. By nature, our interest centers on the characteristics of the radio frequency energy we are pumping out of our antenna . how much, how efficient, its directivity and bandwidth. A properly used Field Strength Meter (FSM) can provide invaluable relative insight to each of these characteristics, and more. The NJQRP Sniffer is a tuned-input, multiband-capable FSM for the HF amateur bands that is easily constructed using commonly available components. By building up this simple project you'll have an enjoyable homebrew experience and end up with a measurement device that can be used for years to come.

The Diode Detector -- Revisited (Again!), by Phil DeCaire, WB7AEI

Sometimes "simple" things are the hardest to understand and get a grip on. Diode detector probes are easy to build and use, but when it comes to what the readings mean you hear a lot of different answers. A recent thread on QRP-L caught my eye - a fellow was using a computer circuit analysis program to analyze the behavior of an RF detector probe circuit. Diode detectors are a superb example of nonlinear circuit elements, and in theory a good computer model should be able to predict the circuit behavior with very good accuracy.

"SPaddle" -- a lightweight vertical paddle, by Seab Lyon, AA1MY
The vertical paddle or "SPaddle" was designed by AA1MY for the ARS "Spartan Sprint", where station weight is a concern. Learn here how to build up this simple and useful field accessory.

Tunable Audio Filter -- Another "20 Minute Project!", by Phil DeCaire, WB7AEI

Sometimes simple circuits can do wonderful things. This is certainly true of the simple active bandpass audio filter described here. Sure, we live in the age where things like DSP and switched capacitor chips give filter performance that nobody even dreamed of 20 years ago. This isn't a substitute for a high-tech filter. But with a dozen parts you probably already have in your junk box, you can build an audio filter that you'll probably like and that you'll use on the air. If you've never tried a simple audio filter, give this one a shot. If you've used an audio filter before, you already appreciate what they can do for you and you may want to try this one.

Enhance your Sniffer with the "Sniffer Mark II" Mods, by Larry Przyborowski, K3PEG

Valued by many as a bonus, super premium and cool device, the clever creation of Joe Everhart, N2CX is an invaluable tool for the hamshack. I'm referring to the Sniffer kit that was provided to registered attendees of Atlanticon 2003. It's an excellent foundation to which additional circuitry may be added to enhance its intended use ... and that's just what I did! Here are my "Mark II" enhancements of bandswitching, audio output, and more all in a vintage collectable enclosure. [NOTE: Larry's construction of a modified Sniffer is truly a work of art. The description in this article concerning steps he followed is a great guide for making your own version, and the full-color and full-resolution images from the article are absolutely stunning in the QHB Extra web site (www.njqrp.org/qhbextra/10). You definitely should check this out. -- n2apb]

Wireless Audio for Mobile Rigs, by Bob Liesenfeld, WB0POQ

If you operate mobile and sometimes have trouble hearing the receive audio, you might try putting together a wireless microphone that transmits the HF rig's audio on 99 MHz so I can tune it in on the radio of the vehicle. This model is a VCXO with a final that does about 90mW into a 10" antenna. Just the ticket for those long hauls on the interstate.

Add a VCO to the Sniffer FSM for Audio Output, by Bob Johansen, WB2SRF

This voltage controlled oscillator circuit was developed for use with the "Sniffer" Field Strength Meter to provide an audio tone that varies in pitch from around 100 Herz with a weak signal, up to about 1 kHz or more with a strong signal. Use it when trying to get readings in the dark or if you are visually-impaired.

A Primitive Antenna Analyzer - Part 2 "Linearity Comp", by Doug Wilson,

WA0VSL

As we chronicled in the last issue, WA0VSL was so enthused by the in-progress "Antenna Analyzer II" project that N2APB and N2CX are developing, he decided to get a head start. In this issue, Doug describes his experiences with compensating for the nonlinearity that detection diodes bring to the table.

Son of PC Power Supply, by Matt Kastigar, W0XEU

Matt W0XEU published an article in both QST and QHB last year that motivated many hams to convert computer power supplies over to bench use for powering HF rigs. Many have since written for additional information, and Matt has graciously allowed us to reprint his recent update made in the St. Louis QRP Society's "Peanut Whistle".

Date: Sun, 25 May 2003 21:53:42 -0700
From: "John K7FD" <john_k7fd@cablespeed.com>
To: <benlightnd13@mchsi.com>
Cc: "'Low Power Amateur Radio Discussion'" <qrp-1@Lehigh.EDU>
Subject: [151316] RE: FP Numbers Needed
Message-ID: <000001c32342\$c8261ae0\$3801a8c0@rv>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="Windows-1252"
Content-Transfer-Encoding: 7bit

Nice to work ya' Jerry...think we have before on other bands, too...

Was on the K2 at 5w into a sloping dipole towards Australia ;)

73 John K7FD, FP96...thanks!

Hey, Any of you folks on the West end of the country want to swop FP #'s. Stop by and see me on 10.114. I'm sittin here listening and calling occasionally

Hope to see ya there: 72 Jerry N0JRN
FP # 546, ARS # 923, ARCI # 11049, ARRL,
Springfield, Mo. <http://home.mchsi.com/~n0jrn/>
MP + # 8, K 1 # 608, SW 20 +, TT 1340 , RM 20 &
40, Tiny Tornado 20, 30, 40, 80, SMK - 1
and so on and so on

Incoming mail is certified Virus Free.
Checked by AVG anti-virus system (<http://www.grisoft.com>).
Version: 6.0.483 / Virus Database: 279 - Release Date: 5/19/2003

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (<http://www.grisoft.com>).
Version: 6.0.483 / Virus Database: 279 - Release Date: 5/19/2003

Date: Sun, 25 May 2003 22:58:29 -0600
From: Tim Groat <tcgroat@earthlink.net>
To: qrp-l@lehigh.edu
Subject: [151317] Re: Third Order Intercept
Message-ID: <5.1.1.6.2.20030525223127.00a231c0@mail.earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

Most present day transceivers use multiple conversions, with the real selectivity coming in the second (or later) IF. The first IF has a "roofing filter", wide enough for every mode the receiver handles. Thus, measuring IMD with 20 KHz spacing puts the signals out of the passband of the roofing filter and they never reach the second mixer. That's not the case with closer spacings, which is why many rigs have poorer IMD performance at 5KHz spacings. The second mixer limits the performance at close spacings, while only the first mixer is significant for wide spacings.

It's noteworthy that ICOM uses two roofing filters in the 7800: 6KHz for CW and SSB, and the usual 20KHz for AM and FM. This will improve the IMD at 5KHz spacing, because the roofing filter is narrow enough to reject the interfering signals. But at that price, I'd prefer a real CW bandwidth filter in the first IF. It's all academic anyway, since it's way beyond my budget.

72,
--Tim (KROU)

>With a modern receiver that doesn't have a tunable preselector, I'd expect
>that the BW of the front would be 500 kHz or so. So any pair of signals in
>there could cause you troubles, if the math is right to put a birdie (IP3
>product) on your desired listening frequency.

>

>72--Nick, WA5BDU

Date: Sun, 25 May 2003 22:05:46 -0700
From: Dan Tayloe <dtayloe@cox.net>
To: qrp-1@Lehigh.EDU, k5di@zianet.com
Subject: [151318] Re: Data for understanding
Message-ID: <3ED1A0AA.D6B77B19@cox.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I took a look at the ARRL measurements for the FT-817. It does not look like they gave the IP3 (also known as third order intercept point or TOI), but rather the IP3 dynamic range (IP3DR or IMD DR). The IP3DR is simply the range the receiver can cover without causing spurs ("spurious free dynamic range"). Once you know the receiver signal levels that cause IP3 spurs, you simply take the difference between this and the receiver sensitivity level.

In the case of the FT-817, sensitivity on 14 MHz is about -134 dbm, while the IP3DR is given as about 93 db. $-134 + 93 = -41$ dbm, which is the point at which off frequency signals can cause receiver spurs to start popping up.

>From the equation I gave earlier, the IP3 of the FT-817 is thus:

$$1.5 \times (A - B) + B$$

or

$$1.5 \times (-41 - (-134)) + (-134)$$

or (working out the negative signs)

$$1.5 \times (-41 + 134) - 134$$

or

$$\text{IP3} = +5.5 \text{ dbm}$$

This IP3 performance is a bit better than a K1, which has an IP3 of about +0 at 14 MHz.

There is nothing wrong with this level of performance under. I have a lot of homebrew '602 rigs that I think work quite well. However, as Dr.

Megacycle observed, this level of receiver performance might have problems handling serious QRO contest situations, or group multi-transmitter operations.

- Dan, N7VE

Date: Mon, 26 May 2003 01:05:39 -0400
From: Pete Burbank <plburbank@earthlink.net>
To: tlogan7@cox.net,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [151319] Re: Very neat cw key site
Message-ID: <5.2.0.9.0.20030526005459.00a3a530@Earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 04:38 PM 5/25/2003, tlogan7@cox.net wrote:

>Hi all -
>This is a facinating site I discovered just now whicj may interest some of
>you.
><http://www.w1tp.com/mrm.htm>
>
>The Marconi like key and story is great.
>73/Tim NZ7C

Tim and Gangue,
Really interesting site.
Can't believe that WB9LPU claims to be an "amateur machinist" :-)
73 to all
Pete NV4V

Date: Mon, 26 May 2003 0:41:36 -0500
From: "Doc K0EVZ" <dock0evz@earthlink.net>
To: "qrp-l reflector" <qrp-l@lehigh.edu>,
"Elecrafft " <elecraft@mailman.qth.net>
Cc: "doc k0evz earthlink" <dock0evz@earthlink.net>
Subject: [151320] W9GR filtre spoken for
Message-ID: <412003512654136277@earthlink.net>
MIME-Version: 1.0
Content-type: text/plain; charset=US-ASCII

Gang:

The W9GR DSP filter has been spoken for. Wow, thanks for the terrific response.

73,
--Doc/K0EVZ

Date: Mon, 26 May 2003 12:23:38 +0200
From: "Sverre Holm - LA3ZA" <la3za@qsl.net>
To: "QRP-L" <qrp-l@Lehigh.EDU>
Subject: [151321] Re: AT Sprint" Q1,Q2 transistor question"
Message-ID: <000001c32370\$dfc27bc0\$8e00a8c0@Master>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="us-ascii"
Content-Transfer-Encoding: 7bit

> Q1, Q2 are supplied as 2N3819's but the schematic, parts list, and
instructions list them > > as 2N3918's.

This is part of the "signature" of the designer: If you look carefully
at the schematic, the crystals are labeled 4.195 MHz for 4.915, the DDS
is AD8935 for AD9835 - nothing to worry about!

73,
Sverre

Sverre Holm, LA3ZA
www.qsl.net/la3za

Date: Mon, 26 May 2003 07:00:54 -0400
From: "w8diz" <w8diz@fpqrp.com>

To: <qrp-1@Lehigh.EDU>
Subject: [151322] Summer of 2003 Fox Hunts
Message-ID: <000a01c32376\$168d7bf0\$b8cf1d41@cinci.rr.com>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Anyone have the schedule and/or web page for the Summer hunts?

72 & "oo's" - Dieter (DIZ) Gentzow - W8DIZ - Loveland, Ohio
Clermont County - EM79uf - near Cincinnati; 39:13:05N 84:18:18W
RIG:multiPIG+ ANT:470 FT Horiz Loop <http://kitsandparts.com>

Date: Mon, 26 May 2003 12:20:50 +0000
From: alk0frp@attbi.com
To: qrp-1@lehigh.edu
Subject: [151323] K0FRP/4
Message-ID: <200305261220.h4QCKpu3021904@rain.CC.Lehigh.EDU>

played with the WPX CW contest 20m only
worked about 20 countries in EU, SA and Carribean

a Bazooka dipole at 20 on the secound floor balcony of the apt.
I will be back the 30th in Denver then back here for at least 3 more weeks.

I tried to hear anyone on 20m for the Hootowl last nite. But everyone was on 40m.
I am eying a tree limb at 55 feethlf way up a tall pine just off the balcony.
a vertical dipole on 40m. "maybe" I have my sling shot and fishing line !!!

Al K0FRP/4 Aiken SC

Date: Mon, 26 May 2003 06:37:06 -0600 (MDT)
From: "Karl F. Larsen" <k5di@zianet.com>
To: David Hinerman <WD8CIV@worldnet.att.net>
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [151324] Re: 10w into my +40 dbm IP3 receiver
Message-ID: <Pine.LNX.4.44.0305260626460.1515-100000@bucket.dog>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi David, I find on my FT-817 which has a RF Gain control, that as I decrease RF gain the hiss drops and when full down there is no hiss at all. I notice that the display shows a big signal which is, of course not true but may mean that the RF gain control may be lowering the gain of more than the RF amplifier. Will look at the book.

It's amazing to me that Yaesu has the design that works from broadcast clear through 30 MHz and then selected frequencies up to 450 MHz. There are birdies but not many. And on 40 meter CW it works fine with a built in keyer. All this in a very small box. That they even have a positive IP3 is is very nice.

On Sun, 25 May 2003, David Hinerman wrote:

>
> >Having said all that, I think that the efforts of most rig designers today
> >would be better put to use reducing the wide band noise introduced in the IF
> >and AF stages, as well as reducing the distortion introduced in the over
> >driven audio stages of many rigs.
>
> Jim,
>
> Is that what causes that ever-present hiss on an HF receiver?
>
> I bought a CW filter just to try to knock that stuff down some. It gets
> pretty annoying.
>
> Dave
>
> -----
> Dave Hinerman
> WD8CIV@att.net
>
>
--

- Karl Larsen k5di Las Cruces,NM Az ScQRPions -

Date: Mon, 26 May 2003 09:01:36 -0700
From: "Nick Kennedy" <nkennedy@tcainternet.com>

To: <w5yr@att.net>,
"Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [151325] Re: Third Order Intercept
Message-ID: <013f01c323a0\$16288680\$0400000a@wa5bdu>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

----- Original Message -----

From: "George, W5YR" <w5yr@att.net>

>

> Enough said! <:} If you want to go ahead with this topic, I suggest that
we

> do it privately since it is sorta OT for QRP-L.

>

George, say it ain't so. Surely principles of receiver design are as
on-topic as a lot of the other fluff we've had on this list recently.

72--Nick, WA5BDU

Date: Mon, 26 May 2003 09:01:08 -0400
From: "Michael C. Boatright" <ko4wx@mindspring.com>
To: qrp-l@lehigh.edu
Cc: tlogan7@cox.net
Subject: [151326] Re: Very neat cw key site
Message-ID: <5.0.2.1.2.20030526085953.02409c70@pop.mindspring.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

Richard tied for first place at the FDIW 2003 building contest, I believe...

72 de Mike, K04WX
Michael C. Boatright

Date: Mon, 26 May 2003 06:08:40 PDT
From: James R Giammanco <n5ib@juno.com>
To: elecrafft@mailman.qth.net, qrp-l@Lehigh.edu
Subject: [151327] OP - USS Kidd Memorial Day operation
Message-ID: <20030526.080525.4639.0.n5ib@juno.com>

Monday May 26: Look for the W5KID, USS Kidd DD-661, from roughly 1400Z to 1930Z on 20/15/40 near the lower end of the General phone bands. Mostly 20, with 40 or 15 as band conditions permit. 10 m possible if open.

Will definitely work 6 m if that band opens like yesterday.

73

Jim, N5IB
for USS Kidd ARC, W5KID
Baton Rouge LA

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Date: Mon, 26 May 2003 09:32:35 -0400
From: "Ron Polityka" <wb3aal@fast.net>
To: ". QRP-L" <qrp-l@lehigh.edu>
Subject: [151328] Appalachian Trail in PA May 26
Message-ID: <02d501c3238b\$54653110\$a8e65cd1@wb3aal>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Hello,

Well it looks like the rain is finally coming to a temporary stop here in PA.

I am heading out to the AT in PA just North of Strausstown, PA on Route 183 in Berks County. I will hike in a few hundred yards and set up my station. If it is still raining when I get to Rte. 183, I will head west to Route 645 just South of Pine Grove, PA. I will be forced to then set up my station and operate out of my car to keep the equipment dry.

Time: Look for me between 14:30 & 16:30 UTC
Freq: 7.040, 10.106, 14.060, or 21.060 MHz
I will start out on 20m, 15m then 30m and 40m.
All depending on propagation.
Rig: K1 @ 5 watts and dipole

72 & Good DX

Ron de WB3AAL
wb3aal@fast.net
www.n3epa.org

Date: Mon, 26 May 2003 10:10:20 -0400
From: Steve.Lawrence@ITWFEG.COM
To: kf4yyd@adelphia.net
Cc: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [151329] Re: PA or antenna
Message-ID: <0F782994F9.C96BBB33-0N85256D32.00480648-85256D32.004DD91E@itwfeg.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"

Tom,
By now you've heard several "improve the antenna" suggestions, which I agree.

Let me suggest several references from the antenna books here in the shack. The one that prompted me to write and thank the authors was:
"Simple and Fun Antennas for Hams" by Hutchinson and Straw

The authors have struck a good balance between the practical and the theoretical in this book. They have left out projects that only a seasoned machinists could construct, and have focused on projects for typical urban installations built with garage shop tools. Prudent use of side bar type articles dive into theory but the book remains very practical.

Also, I've enjoyed the articles in:
"ARRL's Wire Antenna Classics" and in "More Wire Antenna Classics, Volume 2"

Focus here are on wire antennas (of course) ranging from simple dipoles and their off-center fed variants, to wire beams.

Well, given my antenna is on the ground as a result of recent storms, I'll be digging these out for new ideas...

GL,
Steve
aa8af

Date: Mon, 26 May 2003 10:43:45 -0400
From: Vince Santis <vsantis@earthlink.net>
To: "Tentec (E-mail)" <tentec@contesting.com>
Cc: "QRP List (E-mail)" <qrp-l@lehigh.edu>
Subject: [151330] ANC-4 Sold
Message-ID: <01C32373.BFDC4180.vsan@earthlink.net>
MIME-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Content-Transfer-Encoding: 7bit

The ANC-4 has been sold.
Thanks,

Vince Santis, N1VS
Winsted, CT
vsantis@arrl.net
NEQRP # 598
PRP-L # 2372
FISTS# 8053
CC # 1161
K1 #841

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Checked by AVG anti-virus system (<http://www.grisoft.com>).
Version: 6.0.478 / Virus Database: 275 - Release Date: 5/6/03

Date: Mon, 26 May 2003 10:15:37 -0500
From: "George, W5YR" <w5yr@att.net>
To: <w8diz@fpqrp.com>,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [151331] Re: Summer of 2003 Fox Hunts
Message-ID: <003501c32399\$aa617cf0\$0401a8c0@PS>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Doc sez

June 1 Lloyd K3ESE - Jim N0UR
June 8 Alan N3BJ - Dave N0IT

June 15 Al K0FRP - Dennis N4DD
June 22 Dave N0IT - Thomas AC7A
June 29 Dennis N4DD - George K5TR
July 6 *** B Y E W E E K ***
July 13 Thomas AC7A - Al K0FRP
July 22 Larry N2WW - Lloyd K3ESE
July 29 ET N1FN - Alan N3BJ
August 3 George K5TR - Larry N2WW
August 10 Jim N0UR - ET N1FN

Diz, how about a Truffle Hunt this Summer? Great warmup for the Foxing!

73/72, George

Amateur Radio W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13QE
"In the 57th year and it just keeps getting better!"
<mailto:w5yr@att.net>

----- Original Message -----

From: "w8diz" <w8diz@fpqrp.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Sent: Monday, May 26, 2003 6:00 AM
Subject: Summer of 2003 Fox Hunts

> Anyone have the schedule and/or web page for the Summer hunts?
>
> 72 & "oo's" - Dieter (DIZ) Gentzow - W8DIZ - Loveland, Ohio
> Clermont County - EM79uf - near Cincinnati; 39:13:05N 84:18:18W
> RIG:multiPIG+ ANT:470 FT Horiz Loop <http://kitsandparts.com>
>
>
>

Date: Mon, 26 May 2003 11:38:49 -0400
From: Jim Eshleman <jce0@Lehigh.EDU>
To: nkennedy@tcainternet.com
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [151332] Re: Third Order Intercept
Message-ID: <3ED23509.9010901@Lehigh.EDU>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii; format=flowed

Content-Transfer-Encoding: 7bit

> George, say it ain't so. Surely principles of receiver design are as
> on-topic as a lot of the other fluff we've had on this list recently.

A good technical discussion is most welcome here. Please, continue!

73

Jim N3VXI

Date: Mon, 26 May 2003 08:40:25 -0700
From: "john gabbard" <johngabbard@usintouch.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [151333] HW9-8 Main tuning caps
Message-ID: <004201c3239d\$2108d350\$cf811c0c@john>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Try www.orenelliottproducts.com/custom.htm to get an estimate on these caps.
Most likely will have to wait till (Tuesday) now 72 John KF70M

Date: Mon, 26 May 2003 11:52:47 -0400
From: Vince Santis <vsantis@earthlink.net>
To: "Tentec (E-mail)" <tentec@contesting.com>
Cc: "QRP List (E-mail)" <qrp-l@lehigh.edu>
Subject: [151334] Vibroplex FS
Message-ID: <01C3237D.682D76C0.vsanis@earthlink.net>
MIME-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Content-Transfer-Encoding: 7bit

Hi,

I have a Vibroplex standard bug for sale. The SN is 88-2726. It is in good shape
but does need adjusting.

Price is \$125.00 shipped in CONUs.

Thanks,

Vince Santis,N1VS
Winsted, CT
vsantis@arrl.net
NEQRP # 598
PRP-L # 2372
FISTS# 8053
CC # 1161
K1 #841

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Version: 6.0.478 / Virus Database: 275 - Release Date: 5/6/03

Date: Mon, 26 May 2003 12:24:22 -0400
From: "Tom" <kf4yyd@adelphia.net>
To: <tlogan7@cox.net>,
"Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [151335] RE: Very neat cw key site
Message-ID: <EIEBLEILGEEGMLHGH0AGMECBCGAA.kf4yyd@adelphia.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Question: Is the shorting bar (if that's the correct term) found on some straight keys such as my ol cheapo a hold over from the land line telegraph days? I've never been able to figure out its use but think I may have discovered it on this site.

Tom kf4yyd

-----Original Message-----

From: owner-qrp-l@Lehigh.EDU [mailto:owner-qrp-l@Lehigh.EDU] On Behalf Of tlogan7@cox.net
Sent: Sunday, May 25, 2003 4:39 PM
To: Low Power Amateur Radio Discussion
Subject: Very neat cw key site

Hi all -

This is a facinating site I discovered just now whicj may interest some of

you.

<http://www.w1tp.com/mxm.htm>

The Marconi like key and story is great.

73/Tim NZ7C

Date: Mon, 26 May 2003 12:29:55 -0400
From: wkhibbert@juno.com
To: qrp-1@lehigh.edu
Subject: [151336] Re: Software-Defined Rig?
Message-ID: <20030526.123130.-394929.0.wkhibbert@juno.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hi. Keith here in the Depths of the Great Bergen Swamp

I took a look at the info at <http://www.flex-radio.com> and guess that this will have to wait until I am gainfully employed. The pricing was fine, just out of reach at this time.

Thanks for the link.

73, Wm. Keith Hibbert, WB2VUO, TC/WNY ARRL Section
"My night light runs more power than my Rig!!!"

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Date: Mon, 26 May 2003 09:41:09 -0700
From: "Doug Hendricks" <ki6ds@dph.dpol.net>
To: <qrp-1@Lehigh.EDU>
Subject: [151337] Error in Miniboosts board. Dang it.
Message-ID: <032e01c323a5\$9c5fb5c0\$4a0b0d0a@dph.dpol.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Guys, Brian AB6UI discovered an error in the Miniboots kit. Transistor Q2 is supposed to have its emitter grounded. Upon inspection of the board, the emitter lead is NOT grounded. Here is the fix. Scrape off the solder resist with an exacto knife near the emitter lead of Q2 on the top of the board. Then use a resistor lead to provide a ground path. The emitter lead is the one nearest C15. Examine your board closely and you will see what I mean, as the board is now, the hole is not connected to anything!!

Thanks for the heads up Brian. 72, Doug, KI6DS

Date: Mon, 26 May 2003 11:55:13 -0500
From: "George, W5YR" <w5yr@att.net>
To: <nkennedy@tcainternet.com>,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [151338] Re: Third Order Intercept
Message-ID: <005b01c323a7\$970c4460\$0401a8c0@PS>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

----- Original Message -----
From: "Nick Kennedy" <nkennedy@tcainternet.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Sent: Monday, May 26, 2003 11:01 AM
Subject: Re: Third Order Intercept

> ----- Original Message -----
> From: "George, W5YR" <w5yr@att.net>
> >
> > Enough said! <:} If you want to go ahead with this topic, I suggest
that
> we
> > do it privately since it is sorta OT for QRP-L.
> >
>
> George, say it ain't so. Surely principles of receiver design are as
> on-topic as a lot of the other fluff we've had on this list recently.

Nick, you are 100% correct as (almost!) always. <:}

Discussion of receiver design is very much on topic for QRP-L and is a particular favorite topic of mine.

However, the thread in question here only tangentially involved receiver design. Rather, it addressed the question of whether one manufacturer at Dayton was deluding the public by advertising a receiver performance parameter without giving a full technical backup as to how it was measured, etc. Hard to fit all that on a badge.

The topic was "unfair and misleading" market practices. The fact that this was embarrassing and potentially detrimental to another manufacturer exhibiting at Dayton played a role in the discussion as well.

My initial response to this assertion was that I saw no wrongdoing or marketing nonsense since the test conditions leading to the parameter in question could reasonably be assumed to be the typical test protocol used by ARRL Labs, etc. and need be explicitly stated. It is a given that any advertising or marketing efforts seeks to reflect favorably upon the company paying the bill.

This was subsequently rebutted and in response, I saw no further point in debating the issue publically since I feel that "that topic" is indeed beyond the perview of QRP-L. Talking technical is fine with me - taking manufacturers to task for suspected ulterior marketing motives is tiresome at best and, I feel, inappropriate for the list.

I guess I tend to look at the absolute appropriateness of a topic rather than how it compares with "the other fluff."

73/72, George

Amateur Radio W5YR - the Yellow Rose of Texas

Fairview, TX 30 mi NE of Dallas in Collin county EM13QE

"In the 57th year and it just keeps getting better!"

<mailto:w5yr@att.net>

Date: Mon, 26 May 2003 11:54:33 -0400

From: Brian Short <bshort4@cox.net>

To: Low Discussion <qrp-l@Lehigh.EDU>

Subject: [151339] QRP Utilization of Automotive Transport Electrical System

Maintenance Devices, Solar

Message-ID: <57BBFA72-8F92-11D7-A310-00306543B616@cox.net>

Mime-Version: 1.0 (Apple Message framework v552)

Content-Type: text/plain; charset=US-ASCII; format=flowed

Content-Transfer-Encoding: 7bit

I have seen a couple here (or somewhere else maybe) mention the small solar panels used for maintaining battery charge while cars are in transit.

I have acquired 2 of such from another ham and I want to start using them this week when I go camping with the QRP rig in the scenic (and cool) White Mountains region of Arizona.

First, the panel fits on the inside of a window via suction cups. I have removed the suction cups, but now there are fairly large openings on the top of the panel sides.

Since they were designed for inside the window use, I wonder how weather-proof they may be if placed outside (permanently, say)? Looks like it would fill up with water, to me. Experiences?

Secondly, my panels came with a 12vdc accessory plug (the "cigarette lighter" type of years gone by). I have opened it and found a small diode. Anyway, I will probably change the plug. What is a good standard for solar panel connectors? (I'm thinking standard spade lugs etc not multi-\$\$\$ per connection trademarked, patented super-duper pole powers.)

Hopefully, my simple-minded (practical) questions aren't too much fluff for this group of theoreticians...

Brian

--

See my web page: <http://www.k7on.com>

Date: Mon, 26 May 2003 13:00:20 -0400

From: "Ken Simpson, W8EK" <W8EK@fdt.net>

To: "QRP List" <qrp-l@lehigh.edu>

Subject: [151340] Two MFJ active filters FS

Message-ID: <CJENLDMADFCJIFBODNPGAENECJAA.W8EK@fdt.net>

MIME-Version: 1.0

Content-Type: text/plain;

charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

For Sale:

MFJ -751 "Signal Enhancer" tunable CW/SSB filter

This unit is very similar to the Autek QF-1. It has provisions for being a notch filter, a peaking filter, or a low pass filter. The width of the filter can be varied (making it useful on both CW and SSB), and the frequency of the notch, peak, or low pass function can be selected. It is quite versatile. It requires 9 to 18 V DC, and has an input jack, output jack, and a headphone jack on the back. \$50

MFJ 720 "Deluxe Super CW Filter"

This is an audio CW filter, but it is fancier than most of the MFJ CW filters. Well, at least the cabinet is fancier.

The filter has an "off" position along with 180 hz, 110 hz, or 80 hz positions on its rotary switch. There is a 1/4 inch phone jack on the front, with RCA jacks on the back for both speaker and input. There is also a 1/8 inch jack for 9 to 18 V DC to power it, so using your regular 13 V DC supply should work just great. \$40

On both of these filters, the cabinet is one of the TenTec enclosures that matches the Triton series of rigs. It is wood grain and eggshell white. Of course it will match many other rigs also.

Both are in really great shape. I can not find a scratch on them.

Prices do not include shipping from Florida.

Thanks.

73,

Ken, W8EK

Ken Simpson
E-mail to W8EK@fdt.net or W8EK@arrl.net
Voice Phone (352) 732-8400

Date: Mon, 26 May 2003 12:43:07 -0500
From: "George, W5YR" <w5yr@att.net>
To: <jce0@lehigh.edu>,
"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>
Subject: [151341] Re: Third Order Intercept
Message-ID: <00a401c323ae\$47a1bed0\$0401a8c0@PS>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

As I responded to Nick, the thread that I took off-list was only tangentially concerned with receiver design. Rather, it was based upon a complaint against the marketing tactics of a manufacturer at Dayton whose actions were embarrassing another manufacturer and his adherents. The fact that it involved an aspect of receiver design theory was only incidental and was, as far as I could see, not very informative.

I am all for good solid meat and potatoes technical discussions, Jim, as you well know after reading my "stuff" for the past several years. But, I hate to see list bandwidth consumed with emotional reactions to technical topics.

In my view we need to devote our space and time to discussions of facts and theories and problems, and set aside our personal reactions to them. Whether or not I "believe" in a certain technical matter is of little or no importance to anyone except me. Thus, occupying list bandwidth to express "my" feelings or opinions is, to me, unjustified.

I think that the recent contributions by Dan Tayloe have addressed the theoretical aspects of IP3 and related topics far better than I could, and have done so from a purely technical viewpoint.

On the other hand, criticizing a manufacturer for advertising a performance parameter on a badge because he failed to make a full disclosure of his test procedure on said badge is to me an emotional reaction that does not justify continued discussion.

The other party in this discussion is a great guy whom I like very much, and there is nothing personal at all in my decision to discontinue the thread for my part. We just happen not to see things from the same viewpoint, and I can't imagine that the list subscribers are so bored that they would want to read more of a "techno-squabble!" <:}

73/72, George

Amateur Radio W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13QE
"In the 57th year and it just keeps getting better!"
<mailto:w5yr@att.net>

.
----- Original Message -----
From: "Jim Eshleman" <jce0@Lehigh.EDU>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Sent: Monday, May 26, 2003 10:38 AM
Subject: Re: Third Order Intercept

> > George, say it ain't so. Surely principles of receiver design are as
> > on-topic as a lot of the other fluff we've had on this list recently.
>
> A good technical discussion is most welcome here. Please, continue!
>
> 73
> Jim N3VXI
>
>
>

Date: Mon, 26 May 2003 13:09:50 -0500
From: "Jerry Ford" <benlightnd13@mchsi.com>
To: "qrp-l" <qrp-l@lehigh.edu>, "FPigs" <fpqrp-l@mpna.com>
Subject: [151342] TS930 Back on line
Message-ID: <023401c323b2\$00bf6540\$f374da0c@mchsi.com>

Well: The 930 is back on line and cranking out a whoppen big
145 watts into a 50 Ohm load. I just love Kenwoods cold solder
joints. Couldn't locate this one so I ended up reflowing everything
on the final board. Put it back together and BINGO.
I know the Kenwood folks could take some lessons from us on how to
solder a joint!!
So, now it's time for some lunch and then back into the piggie hunt.
Should be back in here around 2:30 CST. I hope to see ya'll here
with all dim piggie numbers cuz ole Lloyd is given me the devil. Now
that we can WAPS's, he's gonna jump back in here and whoop up on me.
Hee Hee

C U L 72 oo to the gang: Jerry N0JRN

FP # 546, ARS # 923, ARCI # 11049, ARRL,
Springfield, Mo. <http://home.mchsi.com/~n0jrn/>
MP + # 8, K 1 # 608, SW 20 +, TT 1340 , RM 20 &
40, Tiny Tornado 20, 30, 40, 80, SMK - 1
and so on and so on

Date: Mon, 26 May 2003 14:35:46 -0400
From: Donald E Sanders <w4bws@juno.com>
To: la3za@qsl.net
Cc: qrp-l@lehigh.edu
Subject: [151343] Re: AT Sprint" Q1,Q2 transistor question"
Message-ID: <20030526.144320.-439501.0.w4bws@juno.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Obviously Dyslexic. "Dyslexic's Untie"

Don W4BWS

On Mon, 26 May 2003 12:23:38 +0200 "Sverre Holm - LA3ZA" <la3za@qsl.net>
writes:

> > Q1, Q2 are supplied as 2N3819's but the schematic, parts list, and
> instructions list them > > as 2N3918's.

>

> This is part of the "signature" of the designer: If you look
> carefully

> at the schematic, the crystals are labeled 4.195 MHz for 4.915, the
> DDS

> is AD8935 for AD9835 - nothing to worry about!

>

>

>

> 73,

> Sverre

>

> -----

> Sverre Holm, LA3ZA

> www.qsl.net/la3za

>

>

>

>

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Date: Mon, 26 May 2003 13:37:48 -0400
From: Brian Short <bshort4@cox.net>
To: Low Discussion <qrp-l@Lehigh.EDU>
Subject: [151344] Lies, Darn Lies, and Specifications
Message-ID: <C4731451-8FA0-11D7-A310-00306543B616@cox.net>
Mime-Version: 1.0 (Apple Message framework v552)
Content-Type: text/plain; charset=US-ASCII; format=flowed
Content-Transfer-Encoding: 7bit

I think that anyone with any degree of sophistication is well aware that specifications are manipulated in (perhaps) subtle ways to sell products.

This happens all of the time! Personally, my peeve is antenna gain specifications. Look in any catalog of antennas and observe the large differences in stated gain of antennas. Antennas with the same number of elements and boom length will have widely different stated gain, depending on manufacturer.

Obviously, one must watch for dbi vs dbd which is a simple thing. There are other issues!

For example, is it theoretical gain? From a modeling program assuming perfect ground reflections with the antenna at an optimal height? Or is it free space? Or, for that matter, where does the gain figure come from?

I don't think we have to get into in-depth discussions of electromagnetics, however, to discuss how these variations of stating gain can be considered in choosing an antenna, in a practical sense.

Sure, "technical" discussions are good, but at least to me, life would be pretty boring on a steady diet of such.

I don't see much point in name calling or finger pointing, though, either.

Brian

--

See my web page: <http://www.k7on.com>

Date: Mon, 26 May 2003 15:01:00 -0400
From: Jim Eshleman <jce0@Lehigh.EDU>
To: w5yr@att.net
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [151345] Re: Third Order Intercept
Message-ID: <3ED2646C.50206@Lehigh.EDU>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii; format=flowed
Content-Transfer-Encoding: 7bit

> The other party in this discussion is a great guy whom I like very much, and
> there is nothing personal at all in my decision to discontinue the thread
> for my part. We just happen not to see things from the same viewpoint, and I
> can't imagine that the list subscribers are so bored that they would want to
> read more of a "techno-squabble!" <:}

Hi George,

There are many here starving for some technical "meat" and I for one will overlook a little "techno-squabble" to hear what the likes of you, Nick, Dan, Steve and others have to say. For sure you all may not always agree, but I'll be here if things get ugly :-). The decision is yours of course. Keep up the good work. And thanks!

73
Jim N3VXI

Date: Mon, 26 May 2003 13:51:39 -0400
From: Brian Short <bshort4@cox.net>
To: Low Discussion <qrp-l@Lehigh.EDU>
Subject: [151346] Dumb Guy Question
Message-ID: <B3BB60C6-8FA2-11D7-A310-00306543B616@cox.net>
Mime-Version: 1.0 (Apple Message framework v552)
Content-Type: text/plain; charset=US-ASCII; format=flowed
Content-Transfer-Encoding: 7bit

Let me be the dumb guy and ask a question...

I have seen folks compare receiver (and transmitter) specifications in great length.

The thing is, to me (dumb guy), that what decides my purchase of a radio is not specifications. Ease of use and various features (perhaps mere bells and whistles to a purist) are what usually attract me to a particular rig. Also, versatility.

That and price (call me cheap guy, too).
Price/performance is as important as absolute performance to me.

I am reminded of an old roommate who used gold connectors on his stereo to play vinyl albums. Personally, I never heard the difference.

So, my simple-minded question is: What would I hear if IP3 (third intercept) were lower than stated. How would this be evident to me in every day usage? What are the practical ramifications (without test instruments)?

Sorry for the non-technical question.

--

See my web page: <http://www.k7on.com>

Date: Mon, 26 May 2003 16:04:19 -0300
From: "Leigh Hawkes" <leighhawkes@ns.sympatico.ca>
To: <qrp-1@Lehigh.EDU>
Subject: [151347] Re: Miniboats Arrival??
Message-ID: <000301c323b9\$9cbcd5a0\$6400a8c0@leighck46i9ilt>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Nothing seen in Nova Scotia as of 26-May-2003. Still waiting.

Leigh, VE1GA

Date: Mon, 26 May 2003 15:10:15 -0400
From: "w8diz" <w8diz@fpqrp.com>

To: <qrp-1@Lehigh.EDU>, <fpqrp-1@fpqrp.com>
Subject: [151348] FPqrp Summer Truffle Hunts
Message-ID: <00b201c323ba\$714df710\$b8cf1d41@cinci.rr.com>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Hi Gang,

The Truffle hunt will commence once again 30 minutes prior
to the official Fox Hunts this summer.
This is a great chance to warm up your rigs
and check band conditions.

We will have TWO truffles for each hunt,
both lasting only 15 minutes each.

So now I'm looking for volunteers.
Every one should be able to handle 15 minutes as the Truffle :)
Send me your requested time slot and I'll update the list.

Mark the following web page for an updated schedule.

<http://fpqrp.com/pighunt2.html>

Good Luck and above all, have FUN!!!

72 & "oo's" - Dieter (DIZ) Gentzow - W8DIZ - Loveland, Ohio
Clermont County - EM79uf - near Cincinnati; 39:13:05N 84:18:18W
RIG:multiPIG+ ANT:470 FT Horiz Loop <http://kitsandparts.com>

Date: Mon, 26 May 2003 14:21:07 -0500
From: George Fremin III <geoiiii@kkn.net>
To: Brian Short <bshort4@cox.net>
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [151349] Re: Dumb Guy Question
Message-ID: <20030526192107.GA27012@kkn.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

On Mon, May 26, 2003 at 01:51:39PM -0400, Brian Short wrote:

>
> So, my simple-minded question is: What would I hear if IP3
> (third intercept) were lower than stated. How would this be
> evident to me in every day usage? What are the practical
> ramifications (without test instruments)?

What you would hear is alot junk as your tune through the band.

In the IP3 test two signals are fed into the receiver and their strength is increased until they produce a third signal.

A real world example is that when the band is full of many strong signals that are strong enough to produce these mixing products in your receiver you will start to hear many "signals" throughout the band.

If you have an attenuator or RF gain control you can usually cure your poorly performing receiver but if you also need to hear some very weak signals you may not be happy with the result of turning down your receiver gain.

Of course if you have poor antennas you may not have many times when the bands are full of signals loud enough to cause most receivers problems.

--
George Fremin III - K5TR
geoiii@kkn.net
<http://www.kkn.net/~k5tr>

Date: Mon, 26 May 2003 13:05:24 -0600
From: "Paul Ermisch" <paul@ermisch.com>
To: "Qrp-List" <qrp-l@Lehigh.EDU>
Subject: [151350] Another AT Sprint lives
Message-ID: <NHBBIMAFPBCKANGJGAPDMEFPCBAA.paul@ermisch.com>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Wow - was going to wait to announce the birth until I had this little gem

packaged but it sure is exciting to pass the smoke test and hear some very clean sigs on 40M.

Applied the sidetone, uP pull-up, and Q7 current limit mods so I wasn't sure if I screwed something up along the way. Still need to tune up the power output, build the 30M and 20M modules, and enclose it. I'll limit my gloating to saying that this rig is just too cool for words.

The XYL will scolded me for staying up until 3AM MDT but it was worth it!

Paul KB0LUR

Date: Mon, 26 May 2003 14:27:01 -0500
From: "Steve Yates - AA5TB" <aa5tb@arrl.net>
To: "QRP-L Distribute" <qrp-l@Lehigh.EDU>
Subject: [151351] Re: Dumb Guy Question
Message-ID: <000301c323bc\$c8ddf8c0\$0100a8c0@MAIN>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Hi Brain,

Not a dumb question at all. In many cases, third order intermodulation product will not be that much of an issue to you. If you are into contesting it might make the difference between hearing and not hearing the station that you are working when many strong signals are present. Casual operation with small antennas may never have a problem.

I sometimes notice IMD with my MFJ-9020 20m rig but it is seldom a show stopper. An adjustable attenuator can help a lot because in the case of the 3rd order IMD, the interfering signal will decrease 3dB for every 1dB of attenuation put in.

For an extreme example of poor IMD performance, take a 2m HT in downtown of any large city with an outside antenna and see how many receiver problems you hear. A lot of people complain of "intermod" when downtown but the problem is usually with their own receiver. HT's usually sacrifice good IMD performance (3rd order, etc.) for high sensitivity for use with their usually poor rubber duck antennas.

73,
Steve Yates - AA5TB

<http://www.qsl.net/aa5tb/>

Date: Mon, 26 May 2003 14:27:33 -0400
From: Brian Short <bshort4@cox.net>
To: Low Discussion <qrp-l@Lehigh.EDU>
Cc: George Fremin III <geoiiii@kkn.net>
Subject: [151352] Clarification of Dumb Guy Question
Message-ID: <B7F3C436-8FA7-11D7-A310-00306543B616@cox.net>
Content-Type: text/plain; charset=US-ASCII; format=flowed
Mime-Version: 1.0 (Apple Message framework v552)
Content-Transfer-Encoding: 7bit

There was a raging debate about specs-manship
between the 7800 Icom and TenTec Orion.

Some feel that Icom cheated on stating specs.

What would I hear different from the Orion to 7800
if in fact the spec were mis-stated to the degree previously
mentioned?

On Monday, May 26, 2003, at 03:25 PM, George Fremin III wrote:

> I guess I dont understand what you are asking.

>

--

See my web page: <http://www.k7on.com>

Date: Mon, 26 May 2003 14:51:31 -0500
From: George Fremin III <geoiiii@kkn.net>
To: Brian Short <bshort4@cox.net>
Cc: Low Discussion <qrp-l@Lehigh.EDU>
Subject: [151353] Re: Clarification of Dumb Guy Question
Message-ID: <20030526195131.GD27012@kkn.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

On Mon, May 26, 2003 at 02:27:33PM -0400, Brian Short wrote:

> There was a raging debate about specs-manship

> between the 7800 Icom and TenTec Orion.
>

I must have missed it.

> Some feel that Icom cheated on stating specs.
>

I do not think either manufacturer has stated much in the way of specs - Icom is saying they have a +40 dBm TOI but they do not give us the spacings that they measured this at. If you look at their brochure and how they say they have designed their receivers I think we can say that it is very likely they will have a very high TOI.

<http://www.qsl.net/ab4oj/icom/ic7800/ic7800pr.pdf>

> What would I hear different from the Orion to 7800
> if in fact the spec were mis-stated to the degree previously
> mentioned?

Do you mean how bad would it sound if the 7800 was only +20 or +30 at a 5kHz spacing as opposed to +40?

All of these would be very good receivers. And except for a band full of very strong signals or in cases where you are very close (ie. 2 kHz or less away) from some very strong signals I don't think you would notice.

Having never used a receiver that is +30 or +40 so I can not offer any insight into how those work and sound.

I do have a friend who has been operating the various 160 meter contests from W8JI and he tells me that the W8JI modified R4C receiver is *amazing* in how well it deals with very strong signals.

In day to day operating on bands that are not full of very strong signals almost any radio can sound and work great.

But during the NCJ sprint or Sweepstakes the number of very strong signals will reduce some receivers to mush.

There are a number of interesting things to read on this subject.

<http://www.w8ji.com/receivers.htm>

http://www.w8ji.com/receiver_tests.htm

and

<http://www.arrl.org/tis/info/pdf/020910qex036.pdf>

--

George Fremin III - K5TR
geoiii@kkn.net
<http://www.kkn.net/~k5tr>

Date: Mon, 26 May 2003 16:26:18 -0400
From: AB6UI@aol.com
To: qrp-l@lehigh.edu
Subject: [151354] 1st MiniBoots QSO
Message-ID: <789FF1FF.36608D7D.0000C623@aol.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit

Now that I found/fixed a problem with the MiniBoots PWB (adding a jumper from the emitter of Q2 to Gnd) I am making lots of contacts. Unfortunatly most of them just a few miles away. KF6RMK, WD9DUI, AC6TU and WB6MQG. All gave me good reports. My RockMite-40 puts out about 3/4W and I am now getting a solid 5W running everything on a 13.8V supply. Now give me some DX BABY!

Look for me on 7.040

Brian

72/73 ES GUD DX DE AB6UI

Date: Mon, 26 May 2003 16:30:34 -0400
From: Mike Czuhajewski <wa8mcq@comcast.net>
To: benlightnd13@mchsi.com,
Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Cc: Mike Czuhajewski <wa8mcq@comcast.net>
Subject: [151355] Re TS930 and solder joints
Message-ID: <015801c323c5\$a935a320\$6401a8c0@gambrl01.md.comcast.net>
MIME-version: 1.0
Content-type: text/plain; charset=iso-8859-1

Content-transfer-encoding: 7BIT

Kenwood? Bad solder joints? Preaching to the choir?

I worked part time fixing radios in a local ham store (now closed) from 1987 to 1994, and the majority of what I fixed was Kenwood. Statistically that doesn't mean much, and doesn't prove that they were worse than any other type, since the store was primarily a Kenwood dealer, although it sold a little Icom for a time. It's just that it was Kenwood territory :-). But I definitely ran into a number of Kenwoods of various sorts that had bad solder joints, at least as they got older. And yes, sometimes the only way to fix something was to give up and just resolder everything within a certain area :-).

Speaking of solder joints, at work we just sent our professional grade digital camera out for repair. It works perfectly fine on internal batteries, but no longer works with the external, plug-in AC supply, which is how we used it 99.999% of the time. I made a prediction of what the problem was, and I'd be willing to put money on it--a lot of money :-).

This is another thing that I saw a great deal of at the ham store, on handheld radios (HTs) from all companies, and it applies equally to other electronic devices. Whenever someone uses an external microphone, power supply, etc a lot, eventually the solder connections holding the pins of the connector onto the PCB will fracture from the repeated stress, opening the connection. And since the solder connections are almost always the only thing holding the connector in place, that's where all the stress goes. If you ever have an HT or any other small electronic device which uses an external power supply, earphone, microphone, etc, and that function goes bad, 99.9% of the time all you'll have to do is resolder the connector :-).

(I could have opened up the digital camera at work and resoldered it myself, but since it technically belongs to the government, and it cost about \$4000, I figured it would be prudent to have it sent in to a repair center instead, especially since I had never opened up one of them before and was not familiar with the disassembly and reassembly.)

And while we're at it, another common problem seen on both HTs and table top radios is the wire going from the center pin of the antenna connector--either SO239 or BNC--to the circuit board. When an antenna is connected and disconnected a lot, stress is placed on the center pin in the connector, causing it to move a bit. Over time, the wire can fatigue and break open. I fixed a fair number of those.

Since some QRP radios are of the "wireless" type with connectors held in place on the circuit boards only by the solder on the pins, you might want to keep an eye on them if you use them for portable operation a lot. It wouldn't be a lot of fun to hike out into the boonies only to find that the

key, earphone, power, whatever, won't work when plugged in. It might not be a bad idea to touch up those solder joints every year or three to be safe. (If the connectors are also held in place on a panel by a nut, this shouldn't be a problem.)

73 and queue our pea DE WA8MCQ

Date: Mon, 26 May 2003 16:38:47 -0400
From: Caitlyn Martin <ku4qd@earthlink.net>
To: qrp-l@lehigh.edu
Subject: [151356] Re: Several Antenna Questions
Message-ID: <20030526163847.67861b5b.ku4qd@earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit

Hi, everyone,

First off, thanks to everyone who answered my questions. I received a lot of responses both privately and on list. Most everyone felt that I was likely using the 80m dipole at the fifth harmonic on 17m and the seventh harmonic on 12m. I should have thought of that one. I have been really under the weather since last weekend and I clearly am not thinking things through. That would explain both the low SWR and decent performance.

I can't respond to everyone and there were lots of really good responses, but James' post was one of the best and had the most food for thought:

On Wed, 21 May 2003 19:39:54 -0600
"James R. Duffey" <JamesDuffey@comcast.net> wrote:

> Caity - You can model your antenna more precisely with W7EL's demo
> copy of ELNEC (DOS), or the free MMANA software. That is probably
> better than the off the top of the head analysis we can do by e-mail.

Thank you. Once I am feeling better I may just do that.

>
> Your 160 feet of RG-8X has about 2.7 dB loss on 17 M, and slightly
> higher at 10 M. The effect of this large loss is to decrease the
> effective SWR at the transmitter end. The reflected current measured
> at the SWR meter when placed at the transmitter is half of what it is

> at the antenna.

I am aware of that and had intended to replace the feedline. Then I got laid off for the second time in 18 months (company going out of business), so the cost is something I can't justify right now. I am getting out, even at my usual QRP power levels, so I will live with it for now and know that I can do better later.

>

> The consequence of this loss is that with 2.7 dB loss, an antenna SWR
> of 5:1 or less will look like 2:1 or less at the transmitter. The
> function is asymptotic, so even an SWR of 100:1 at the antenna will
> not measure much above 3:1 at the transmitter. Yet another reason to
> reject SWR as an antenna figure of merit.

Thank you. That was pointed out by several people, but your explanation was the clearest and most detailed.

>

> As others have mentioned, the odd multiples of a half wavelength
> antenna, 3,5,7, and so forth, will have fairly low, purely resistive
> feed points. The resonant frequencies are not on exact multiples of
> the fundamental however. This is due to the end effect, which reduces
> the effective dipole length due to capacitive loading at the ends. So
> instead of:

>

> dipole length = $468/\text{Frequency (MHz)}$

>

> for a single dipole; the resonant frequency of a long wire with N half
> waves is:

>

> length = $492(N-0.05)/\text{frequency (MHz)}$

>

> Since the 80 M band is 0.5 MHz wide, the exact frequency of the
> harmonic can vary greatly at higher frequencies, $7 \times 0.5 = 3.5 \text{ MHz!}$

Great info here, especially for future wire antenna building projects.

>

> If your 80 M dipole is cut for the QRP frequency, 3.540, then the
> length will be 132.2 feet This will resonate at 10.97 MHz, 18.42 MHz,
> and 25.86, and 33.33

Something interesting I should add here. We *thought* we had cut the 80m dipole just as you suggested. It is entirely possible that we messed up on measuring, but... When we put the analyzer on the feedline we found that while 40m and 20m performed exactly as expected, the resonant frequency on 80m was well above the top of the band. We had to add wire to get it to resonate where I wanted it. To get it down to a little above where I ideally would have cut the antenna (for 3.540) required adding 15' of wire. I should also point out that the 80m

dipole is the only one using insulated wire as opposed to the twisted 14ga. copper typically sold for antenna wire. Anyway, adding the extra wire did not affect the resonance on 40, 20, or 15, so we left everything alone once it seemed to all work.

>

> So this is a bit high for 30 M, will be a bit high for 17 M, but
> probably still below 2:1 SWR, and on 12 M, it will be high, but with
> the large feed line loss, it will probably be less than 2:1. I think
> that is more or less what you see.

On 30m SWR is in excess of 5:1, FWIW.

>

> On 40 M, the third harmonic will fall on 21.9 MHz, a bit outside of
> the band, but the line loss helps here to bring the SWR below 2:1.

...and with a tuner, and with wonderful propagation when 15m is open, it works.

>

> On 17 M, the 20 M dipole will
> be inductive, and the 40 M dipole will be capacitive, by roughly the
> same amount so this can shift the 17 M resonance of the 80 M dipole up
> or down a bit. In your case it probably shifts it down.

I suspect you are right, because according to the analyzer the lowest point in the dip was somewhere around 18.28. The antenna works VERY well on 17m.

>

> How does it load on 30 M?

As I said, the SWR is very high. With a manual antenna tuner I can make it work. I have no idea how efficient it is there, though, and I honestly haven't been on the air much lately since I haven't been feeling well. I haven't worked 30 at all.

>

> If I were you, I would try to find some way to replace some or all of
> that 160 feet of RG-8X with lower loss feed line.

Absolutely, but not until finances are normal again.

> I hope that this helps.

It does. Thanks to you and to everyone else who responded.

72/73,
Caity
KU4QD

Date: Mon, 26 May 2003 16:39:06 -0400
From: Caitlyn Martin <ku4qd@earthlink.net>
To: qrp-l@lehigh.edu
Subject: [151357] Re: Dumb Guy Question
Message-ID: <20030526163906.30dd2181.ku4qd@earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit

On Mon, 26 May 2003 13:51:39 -0400
Brian Short <bshort4@cox.net> wrote:

> Let me be the dumb guy and ask a question...
>
> I have seen folks compare receiver (and transmitter)
> specifications in great length.
>
> The thing is, to me (dumb guy), that what decides my
> purchase of a radio is not specifications. Ease of use
> and various features (perhaps mere bells and whistles
> to a purist) are what usually attract me to a particular rig.
> Also, versatility.
>
> That and price (call me cheap guy, too).
> Price/performance is as important as absolute performance
> to me.

A while back I had an Icom IC-575H high end 6m/10m rig. I did an A/B/C comparison using a coax switch feeding the same antenna with the same feedline. The rigs I compared it to were older, simpler radios: an NCG 7/21/50 and a Mizuho MX-606D. I was working a station up in Norlina, NC (30 or so miles north as the crow flies from my QTH) who was running an Icom IC-502A, barefoot, 3W out, into a 160m dipole. Up to that point I thought the Icom IC-575H, a highly touted rig with great specs, was the best 6m rig out there. Guess what? I couldn't copy the other station clearly on the IC-575H. He was more in the noise than out of it. I could copy him clearly on the NCG 7/21/50. Performance on the Mizuho was in between the other two.

Assuming my IC-575H was performing properly and had nothing wrong with it (which I believe to be the case) there are a number of factors that could have caused this. First, the NCG was never put through serious lab tests by any publication I know of. It could really and truly have been a superior receiver in terms of sensitivity. Another very real possibility is the audio response of the NCG or Mizuho vs. the Icom, which won't show up in any receiver specs. Tone of the received signal does make a difference, as does the difference in different people's

hearing.

I posted a mediocre review of the IC-575H on eHam and got more e-mail in protest than you could likely imagine. Yet my review was honest. I attribute it to two factors: 1) Very few people own the NCG rig and can make the comparison I did, and 2) Hams who buy expensive gear that is supposed to be among "the best" tend to defend their rigs to the hilt. How dare I point out a flaw? Never mind that I repeated the test on a number of occasions and my real world experience with the IC-575H was not that good.

The Kenwood TS-2000 and Yaesu FT-897 both put up some truly lousy lab test numbers. Hams swear by those rigs, saying they are the best they ever owned. Part may be convenience/bells and whistles. The Yaesu FT-817 is a so-so rig at best in terms of receiver performance. It's size, convenience, and features make it the ultimate rig for some QRPers. Another part may be that the specs just aren't the holy grail all the time. Kenwood is known for wonderful received audio. It really could be that the rigs sound great to some people's ears. Those performance numbers of some rigs sure scare me off, though.

My point: YMMV is always the rule. Still, if you are spending big bucks for a high end rig you have a right to expect superior performance. Even if money wasn't an issue right now I would **never** buy a TS-2000.

72/73,
Caity
KU4QD

Date: Mon, 26 May 2003 14:58:29 -0600
From: "Dave Ek" <ekdave@earthlink.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Cc: <CBates1122@aol.com>, <n0tu@codenet.net>
Subject: [151358] Memorable Memorial Weekend backpacking & QRP
Message-ID: <009101c323c9\$8fd908f0\$6d00a8c0@NORTHROPJ6SJ50>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="Windows-1252"
Content-Transfer-Encoding: 7bit

Gang,

Just got back from spending the weekend near the Ute Creek Trail in the Lost Creek Wilderness here in Colorado. Steve N0MHQ and I hiked in for about an

hour to get to our planned FD site for this year, and didn't see another soul for the next 48 hours. We both brought rigs along, my K1 and Steve's SST for 20m, knowing that this was the weekend for the WPX contest as well as the ARCI Hootowl Sprint. The packs were kinda heavy, as we both packed in a four-pack of fine brew (to be kept cold by the ice pack from Ute Creek) and I hauled in a few extra toys, like my dual band HT and Arrow satellite antenna. We spent all of Saturday and Sunday hiking, playing radio, and dodging raindrops. Saturday started beautifully, but by lunchtime the sky was becoming gray and the wind picked up. During our hikes in the afternoon, we stumbled across three deer grazing near the edge of a meadow, and we were able to watch them from not too far away before they noticed us and fled. We had various rain showers that afternoon, with a respite in the evening before the rain started at bed time and kept up for a couple of hours. I worked a few DX contacts in the WPX contest.

I woke up at 4 AM on Sunday morning (nature call) and saw that the sky had cleared, and the Milky Way was clearly visible directly overhead! Hadn't seen that in a while.

Sunday was much the same, with less thunder and lightning. The temps were cooler, and I think that contributed to a general clearing trend, for the sky was clear by the time darkness fell. We spent much of Sunday scouting for wildlife like the deer we saw on Saturday, but no such luck. We did take a shot at a couple of UO-14 satellite passes with the HT, and on the evening pass worked a few stations (a first for Steve). We also spent a little time working the Hootowl sprint. I managed a dozen or so contacts before I couldn't stop yawning.

Despite the rain, it was a most enjoyable weekend. Our camp site has some monster pine trees. I need to remember to bring along enough string and feedline to hang my G5RV waaaaaay up high for Field Day!

73 de Dave NK0E

Date: Mon, 26 May 2003 16:08:43 -0500
From: "George, W5YR" <w5yr@att.net>
To: <jce0@lehigh.edu>,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [151359] Re: Third Order Intercept
Message-ID: <021e01c323ca\$ff07c0d0\$0401a8c0@PS>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Thanks, Jim - I'll try to help as much as I can.

I just realized in re-reading my last posting that I was guilty of doing what I was condemning: voicing personal feelings about a technical subject! <:}

Since I have already put my foot in it let me say this about my attitude about what we post here on QRP-L. For information only . . .

I think that almost any topic is permissible and useful if it pertains in any way to QRP activity or equipment, either individual or in general; provides accurate technical information on a useful subject; answers questions for one or more readers; and minimizes the personal 'attitude' of the poster. Bragging about Fox Hunt prowess falls into a gray area, but since I am guilty of a lot of that, I must be for it! <:}

For example, we had a lot of commotion - largely due to me I suspect - last year on the topic of conjugate matching. I tried to present the theory and the technical side of the picture, but amazingly the list quickly divided into two camps: those who "believe" in CM and those who do not!

As I tried to point out, it makes about as much sense to "believe" in Ohm's Law or not. CM *is* and has been for over 70 years. You do not have to either appreciate it or "believe" in it for your antenna system to operate as it does. But it helps to understand how and why . . .

The theory and facts which allow our equipment to be designed and to operate are not subjects for personal emotional adoption or rejection.

If someone posts something in error, then I feel that anyone recognizing that error, and competent to do so, should post a polite correction.

But, let's *stick to the facts* and not take somebody apart over it. Honest people make honest errors and these deserve to be corrected. But no one should ever read a posting on QRP-L and go away feeling that someone has been disrespected or insulted or made to feel unwelcome for asking a question.

To those who "think" they have an understanding of a topic and wish to share with the list, I suggest spending a few minutes with "the books" to verify that what they are posting is indeed accurate.

Again, "enough!" I talk too much . . . thanks again, Jim, for the kind words.

73/72, George

Amateur Radio W5YR - the Yellow Rose of Texas

Fairview, TX 30 mi NE of Dallas in Collin county EM13QE

"In the 57th year and it just keeps getting better!"
<mailto:w5yr@att.net>

----- Original Message -----

From: "Jim Eshleman" <jce0@Lehigh.EDU>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Sent: Monday, May 26, 2003 2:01 PM
Subject: Re: Third Order Intercept

> > The other party in this discussion is a great guy whom I like very much,
> and
> > there is nothing personal at all in my decision to discontinue the
> thread
> > for my part. We just happen not to see things from the same viewpoint,
> and I
> > can't imagine that the list subscribers are so bored that they would
> want to
> > read more of a "techno-squabble!" <:}
>
> Hi George,
>
> There are many here starving for some technical "meat" and I for one
> will overlook a little "techno-squabble" to hear what the likes of you,
> Nick, Dan, Steve and others have to say. For sure you all may not
> always agree, but I'll be here if things get ugly :-) The decision is
> yours of course. Keep up the good work. And thanks!
>
> 73
> Jim N3VXI
>

Date: Mon, 26 May 2003 14:23:31 -0700 (PDT)
From: Fred Bonavita <k5qlf@yahoo.com>
To: qrp-l@lehigh.edu
Subject: [151360] K2 wanted
Message-ID: <20030526212331.94661.qmail@web21407.mail.yahoo.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii

Is there a K2 out there in need of a good home? If so, let's talk. I'm looking for a second K2, but I don't have time now to assemble one. What I want is the basic rig with a relatively high s/n, noise blanker and audio filter/clock. What I am not interested in is the 100W amp, built-in ATU, RS-232 interface, 160m, microphone or PSK upgrade. I will consider a rig with the ssb board and/or the A-to-B upgrade, but they are options only. Please reply directly to k5qlf@yahoo.com, giving full details and asking price in first message. Thank you. Fred, K5QLF, San Antonio..

Do you Yahoo!?
The New Yahoo! Search - Faster. Easier. Bingo.
<http://search.yahoo.com>

Date: Mon, 26 May 2003 15:34:31 -0600 (MDT)
From: "Karl F. Larsen" <k5di@zianet.com>
To: Dan Tayloe <dtayloe@cox.net>
Cc: qrp-l@Lehigh.EDU
Subject: [151361] Re: Data for understanding
Message-ID: <Pine.LNX.4.44.0305261506390.2093-1000000@bucket.dog>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi Dan, I finally got the numbers figured out and your calculation of the TOI for the FT-817 used apples and oranges from the 14 MHz ARRL reported data. If you use the MDS for preamp on of -134 dbm then you must use the IMD-DR for the 20 KHz spacing preamp on which is 84.3 DB and both the ARRL and your method give -7.55 DB for this condition. Problem is the review in April 2001 gives -5.6 DB. Not sure at all why.

Using the preamp off data which is MDS = -125.9 dbm and IMD-DR = 86.7 DB the ARRL Lab way gives +4.15 DB and so does yours of course. For some reason ARRL reports +5.0 dbm.

So I now know how to prove your method is identical to the method shown in testproc.pdf which is $TOI = 1.5(IMD-DR) + MDS$. So there is no mystery there.

I will read on and see if some other factor enters into TOI.

And having a TOI of +40 is only good when the band is crowded by a contest you're in, or you're the Fox in a QRP-L Hunt.

On Sun, 25 May 2003, Dan Tayloe wrote:

> I took a look at the ARRL measurements for the FT-817. It does not look
> like they gave the IP3 (also known as third order intercept point or
> TOI), but rather the IP3 dynamic range (IP3DR or IMD DR). The IP3DR is
> simply the range the receiver can cover without causing spurs ("spurious
> free dynamic range"). Once you know the receiver signal levels that
> cause IP3 spurs, you simply take the difference between this and the
> receiver sensitivity level.

>

> In the case of the FT-817, sensitivity on 14 MHz is about -134 dbm,
> while the IP3DR is given as about 93 db. $-134 + 93 = -41$ dbm, which is
> the point at which off frequency signals can cause receiver spurs to
> start popping up.

>

> >From the equation I gave earlier, the IP3 of the FT-817 is thus:

>

> $1.5 \times (A - B) + B$

>

> or

>

> $1.5 \times (-41 - (-134)) + (-134)$

>

> or (working out the negative signs)

>

> $1.5 \times (-41 + 134) - 134$

>

> or

>

> IP3 = +5.5 dbm

>

> This IP3 performance is a bit better than a K1, which has an IP3 of
> about +0 at 14 MHz.

>

> There is nothing wrong with this level of performance under. I have a
> lot of homebrew '602 rigs that I think work quite well. However, as Dr.
> Megacycle observed, this level of receiver performance might have
> problems handling serious QRO contest situations, or group
> multi-transmitter operations.

>

> - Dan, N7VE

>

>

--

- Karl Larsen k5di Las Cruces,NM Az ScQRPions -

Date: Mon, 26 May 2003 16:32:19 -0500
From: "Jim Sheldon" <w0eb@cox.net>
To: <qrp-1@lehigh.edu>
Subject: [151362] RE: Re TS930 and solder joints
Message-ID: <IBEGLCMLCDHHEFLBPHBOAEACMAA.w0eb@cox.net>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Absolutely right on the money. I had an Alinco DJ-580T H/T that was always breaking the antenna connection. The way they constructed them was to solder a piece of #18 SOLID wire from the BNC connector centerpin and just fillet solder it to a flat pad with no hole in it. The movement of the pin from even the vibration of the "Rubber Duck" antenna would eventually break the solder joint at the fillet. The way I fixed the problem pretty much permanently was to remove the #18 wire and replace it with a piece of real small "Solder Wick", being careful to flow solder only to the parts that were on the pad and the connector center pin. That left a nice, flexible piece of braid between the pc board and the connector. After I made this mod, the problem went away. This would work nicely for other things as well. You could use stranded instead of solid wire too, just be careful not to nick any of the strands when you strip it. Tin it before inserting in the PC board holes to keep little hairs from spreading and shorting to other pads.

Jim, W0EB

-----Original Message-----

From: owner-qrp-1@Lehigh.EDU [mailto:owner-qrp-1@Lehigh.EDU]On Behalf Of Mike Czuhajewski
Sent: Monday, May 26, 2003 3:31 PM
To: Low Power Amateur Radio Discussion
Subject: Re TS930 and solder joints

Kenwood? Bad solder joints? Preaching to the choir?

I worked part time fixing radios in a local ham store (now closed) from 1987 to 1994, and the majority of what I fixed was Kenwood. Statistically that doesn't mean much, and doesn't prove that they were worse than any other

type, since the store was primarily a Kenwood dealer, although it sold a little Icom for a time. It's just that it was Kenwood territory :-). But I definitely ran into a number of Kenwoods of various sorts that had bad solder joints, at least as they got older. And yes, sometimes the only way to fix something was to give up and just resolder everything within a certain area :-)

Speaking of solder joints, at work we just sent our professional grade digital camera out for repair. It works perfectly fine on internal batteries, but no longer works with the external, plug-in AC supply, which is how we used it 99.999% of the time. I made a prediction of what the problem was, and I'd be willing to put money on it--a lot of money :-)

This is another thing that I saw a great deal of at the ham store, on handheld radios (HTs) from all companies, and it applies equally to other electronic devices. Whenever someone uses an external microphone, power supply, etc a lot, eventually the solder connections holding the pins of the connector onto the PCB will fracture from the repeated stress, opening the connection. And since the solder connections are almost always the only thing holding the connector in place, that's where all the stress goes. If you ever have an HT or any other small electronic device which uses an external power supply, earphone, microphone, etc, and that function goes bad, 99.9% of the time all you'll have to do is resolder the connector :-)

(I could have opened up the digital camera at work and resoldered it myself, but since it technically belongs to the government, and it cost about \$4000, I figured it would be prudent to have it sent in to a repair center instead, especially since I had never opened up one of them before and was not familiar with the disassembly and reassembly.)

And while we're at it, another common problem seen on both HTs and table top radios is the wire going from the center pin of the antenna connector--either SO239 or BNC--to the circuit board. When an antenna is connected and disconnected a lot, stress is placed on the center pin in the connector, causing it to move a bit. Over time, the wire can fatigue and break open. I fixed a fair number of those.

Since some QRP radios are of the "wireless" type with connectors held in place on the circuit boards only by the solder on the pins, you might want to keep an eye on them if you use them for portable operation a lot. It wouldn't be a lot of fun to hike out into the boonies only to find that the key, earphone, power, whatever, won't work when plugged in. It might not be a bad idea to touch up those solder joints every year or three to be safe. (If the connectors are also held in place on a panel by a nut, this shouldn't be a problem.)

73 and queue our pea DE WA8MCQ

Outgoing mail is certified Virus Free.

Checked by AVG anti-virus system (<http://www.grisoft.com>).

Version: 6.0.483 / Virus Database: 279 - Release Date: 5/19/2003

Date: Mon, 26 May 2003 14:42:37 -0700

From: Randy Foltz <rfoltz@turbonet.com>

To: AB6UI@aol.com, qrpl_post <qrpl-1@lehigh.edu>

Subject: [151363] Re: 1st MiniBoots QSO

Message-ID: <3ED28A4D.7EE432AD@turbonet.com>

MIME-Version: 1.0

Content-Type: text/plain; charset=us-ascii

Content-Transfer-Encoding: 7bit

Well I see that Brian has beat me to the bragging rights for 1st Miniboosts QSO on 40. I guess that I'll have to claim the first one on 20m. It was ID to TX with a 559 from him for my 5 w and I gave K5CFA a 579 for his 200 w. I was using an SST to drive the Miniboosts. Not the best conditions to be testing a new amp, but you take what you can get.

I made the change a bit differently by running a wire from the emitter of Q2 to the BNC ground pad. Seemed easier to me than scrapping off the solder resist.

I'll be looking for more contacts on 14.060.

--

73,

Randy, K7TQ

Moscow, ID

QRP ARCI Contest Chairman

AB6UI@aol.com wrote:

>

> Now that I found/fixed a problem with the MiniBoots PWB (adding a jumper from the emitter of Q2 to Gnd) I am making lots of contacts. Unfortunately most of them just a few miles away. KF6RMK, WD9DUI, AC6TU and WB6MQG. All gave me good reports. My RockMite-40 puts out about 3/4W and I am now getting a solid 5W running everything on a 13.8V supply. Now give me some DX BABY!

>

> Look for me on 7.040

>

> Brian
>
> 72/73 ES GUD DX DE AB6UI

Date: Mon, 26 May 2003 22:53:14 +0100
From: "Tony Fishpool" <g4wif@btinternet.com>
To: "QRP-1" <qrp-1@lehigh.edu>, "GQRP list" <gqrp@yahoogroups.com>
Subject: [151364] Diamond CP6 Antenna
Message-ID: <00a301c323d1\$47df60\$4345fea9@celeron>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

At a recent "open day" at a local ham shop I rescued loads of antenna parts from the 50 pence junk bin and later found I had all the important parts for a Diamond CP6 antenna.

I have the traps and radials but what I don't have is the tubing in-between. The online catalogue doesn't specify the length of these parts and I was hoping that someone out there would have that information.

Kind regards
Tony - G4WIF

End of QRP-L Digest 2932

